DICOM CONFORMANCE STATEMENT

FOR

DC-8/DC-8 PRO/DC-8 CV/

DC-8 EXP/DC-8S

DIAGNOSTIC ULTRASOUND SYSTEM

mindray 迈瑞

Version V4. ! "4- #- !

SHENZHEN MINDRAY I ! -MEDI " A# E#E " $R ! NI " S " ! ‰ #$D%
Mindray 'ilding& (e)i 12th R*ad S*'th& High-te+h Ind'strial ,ar-& Nanshan&
Shen.hen /100/1& ,%R% "hina

" Con-or , $n'e S&$&e , en& O.er.ie /

$his d*+'2ent des+ri3es the +*n4*r2an+e t* the A"R-NEMA DI" !M 5%0 Standard 3y the 'ltras*'nd syste2 *4 D"-0%D"-0 ,R!%D"-0 "7%D"-0 E8 ,%D"-0S% 9e s:e+i4y 'ltras*'nd syste2 generally re4er t* the :r*d'+ts a3*ve in this d*+'2ent% $he 'ltras*'nd syste2 i2:le2ents the ne+essary DI"!M servi+es t* d*;nl*ad ;*r-lists 4r*2 an in4*r2ati*n syste2& save a+<'ired =ltras*'nd >=S? i2ages and ass*+iated Str'+t'red Re:*rts t* a net;*r- st*rage devi+e and%*r re2*va3le 2edia& :rint t* a net;*r-ed hard+*:y devi+e& <'ery and retrieve the =S i2ages 4r*2 a net;*r-ed st*rage syste2& and in4*r2 the in4*r2ati*n syste2 a3*'t the ;*r-s a+t'ally d*ne% $a3le 1 :r*vides an *vervie; *4 the s'::*rted net;*r- servi+es& $a3le 2 lists the s'::*rted Media St*rage A::li+ati*n ,r*4iles& and $a3le 5 lists the s'::*rted Str'+t'red Re:*rt $e2:lates%

T$0(e "
NET1OR2 SERVICES

SOP C(sses	User o- Ser.i'e 3SCU4	Pro.i*er o- Ser.i'e 3SCP4
Tr$ns-er S&or$%e		
7eri4i+ati*n	Yes	Yes
=ltras*'nd I2age St*rage	Yes	Yes
=ltras*'nd M'lti-4ra2e I2age St*rage	Yes	Yes
Se+*ndary "a:t're I2age St*rage	Yes	Yes
En+a:s'lated ,D@ St*rage	Yes	Yes
Enhan+ed =S 7*I'2e St*rage	Yes	N*
Ra; Data St*rage	Yes	Yes
5)er+/Re&rie.e		
St'dy R**t A'ery6Retrieve In4*r2ati*n M*del B @IND	Yes	N*
St'dy R**t A'ery6Retrieve In4*r2ati*n M*del B M!7E	Yes	N*
1or6-(o / Mn%e , en&		
M*dality 9*r-list In4*r2ati*n M*del B @ind	Yes	N*
M*dality ,er4*r2ed ,r*+ed're Ste:	Yes	N*
St*rage "*2 2it2ent ,'sh M*del	Yes	N*

SOP C($sses	User o- Ser.i'e 3SCU4	Pro.i*er o- Ser.i'e 3SCP4
Prin& Mn%e,en&		
asi+ "*l*r ,rint Manage2ent	Yes	N*
asi+ Crays+ale ,rint Manage2ent	Yes	N*
No&es7 Re8or&s7 Me$s)re,en&s7 Tr$ns-er		
"*2 :rehensive SR St*rage	Yes	Yes

T$0(e !
MEDIA SERVICES

Me*i$ S&or$%e A88(i'$&ion Pro-i(e	1ri&e Fi(es 3FSC / FSU4	Re$* Fi(es 3FSR4
Co,8$'& Dis6 - Re'or*$0(e		
S$D-=S-S"-S@DM@-"DR	Yes 6 Yes[1]	Yes
DVD		
S$D-=S-S"-S@DM@-D7D S$D-=S-S"-S@DM@-D7D-RAM	Yes 6 Yes[1]	Yes
US9 De.i'es		
S$D-CEN-=S -E,EC 4*r =ltras*'nd i2ages& +*2 :ressed and 'n+*2 :ressed and Str'+t'red Re:*rts	Yes 6 Yes[1]	Yes

N*teF
1 !nly a+ts as a @S= 4*r 2edia that 2ay 3e ;ritten t* 2'lti:le ti2es%

T$0(e :
STRUCTURED REPORTS

Con'e8& N$,e	S)88or&e*
! -CYN =ltras*'nd ,r*+ed're Re:*rt	Yes
E+h*+ardi*gra:hy ,r*+ed're Re:*rt	Yes
7as+'lar =ltras*'nd Re:*rt	Yes
reast I2aging Re:*rt	Yes

! T$0(e o- Con&en&s

: In&ro*)'&ion

:." Re.ie/ ;is&or+

DOCUMENT VERSION	DATE OF ISSUE	DESCRIPTION
1.0	Oct. 26, 2011	Creation of the document
2.0	Jun.27,2012	Added 3D/4D image Storage Revised str'+t'red re:*rting te2:late%
3.0	!e".27.2013	#$date "ardia+ and ! B CYN str'+t'red re:*rting te2:late%

:.! A)*ien'e

$his d*+'2ent is intended 4*r :*tential +'st*2ers& syste2 integrat*rs *4 2edi+al e<'i:2ent& 2ar-eting sta44 interested in syste2 4'n+ti*nality and s*4t;are designers i2:le2enting DI"!M inter4a+es% It is ass'2ed that the readers *4 this d*+'2ent are 4a2iliar ;ith the DI"!M Standard and ;ith the ter2in*l*gy and +*n+e:t ;hi+h are 'sed in the Standard% I4 readers are 'n4a2iliar ;ith DI"!M ter2in*l*gy they sh*'ld read the DI"!M Standard& :ri*r t* reading this DI"!M "*n4*r2an+e State2ent d*+'2ent%

:.: Re,$r6s

$he s+*:e *4 this DI"!M "*n4*r2an+e State2ent is t* 4a+ilitate integrati*n 3et;een Mindray ,r*d'+ts and *ther DI"!M :r*d'+ts% $he "*n4*r2an+e State2ent sh*'ld 3e read and 'nderst**d in +*n)'n+ti*n ;ith the DI"!M Standard% DI"!M 3y itsel4 d*es n*t g'arantee inter*:era3ility% $he "*n4*r2an+e State2ent d*es& h*;ever& 4a+ilitate a 4irst-level +*2:aris*n 4*r inter*:era3ility 3et;een di44erent a::li+ati*ns s'::*rting +*2:ati3le DI"!M 4'n+ti*nality%

$his "*n4*r2an+e State2ent is n*t s'::*sed t* re:la+e validati*n ;ith *ther DI"!M e<'i:2ent t* ens're :r*:er eJ+hange *4 intended in4*r2ati*n% In 4a+t& the 'ser sh*'ld 3e a;are *4 the 4*ll*;ing i2:*rtant iss'esF

L $he +*2:aris*n *4 di44erent "*n4*r2an+e State2ents is the 4irst ste: t*;ards assessing inter+*nne+tivity and inter*:era3ility 3et;een Mindray 2edi+al e<'i:2ent and *ther DI"!M +*n4*r2ant e<'i:2ents%

% $est :r*+ed're sh*'ld 3e de4ined and eJe+'ted t* validate the re<'ired level *4 inter*:era3ility ;ith s:e+i4i+ +*2:ati3le DI"!M e<'i:2ent& as esta3lished 3y the health+are 4a+ility%

% $he DI" ! M standard ; ill ev*lve t* 2eet the 'ser%s gr* ; ing re<'ire 2ents% Mindray is a+tively inv*lved in the devel*: 2ent *4 the DI" ! M standard&% $here4*re& Mindray reserves the right t* 2a-e +hanges t* its :r*d'+ts *r t* dis+*ntin'e its delivery%

% $he =ltras*'nd Syste2 4*ll* ; s the IHE S9@& , DI& ED , r*4iles%

:.4 Ter , s $n* De-ini&ions

A0s&r$'& S+n&$< B the in4*r2ati*n agreed t* 3e eJ+hanged 3et ; een a: :li+ati*ns& generally e<'ivalent t* a Servi+e6 ! 3)e+t , air >S ! , ? "lass% EJa2 :lesF 7eri4i+ati*n S ! , "lass& M*dality 9*r-list In4*r2ati*n M*del @ind S ! , "lass& "*2 :'ted Radi*gra:hy I2age St*rage S ! , "lass%

A88(i'$&ion Con&e<& B the s:e+i4i+ati*n *4 the ty:e *4 +*2 2'ni+ati*n 'sed 3et ; een % EJa2 :leF DI" ! M net ; *r- :r*t*+*l%

A88(i'$&ion En&i&+ 3AE4 B an end :*int *4 a DI" ! M in4*r2ati*n eJ+hange& in+l'ding the DI" ! M net ; *r- *r 2edia inter4a+e s*4t ; are% i%e%& the s*4t ; are that sends *r re+eives DI" ! M in4*r2ati*n *3)e+ts *r 2essages% A single devi+e 2ay have 2'lti:le A: :li+ati*n Entities%

A88(i'$&ion En&i&+ Ti&(e B the eJternally -n* ; n na2e *4 an & 'sed t* identi4y a DI" ! M a: :li+ati*n t* *ther DI" ! M a: :li+ati*ns *n the net ; *r-% $he "alled AE $itle de4ines the intended re+eiver *4 an Ass*+iati*n% Nevertheless& the "alling AE $itle de4ines the re<'est*r *4 an Ass*+iati*n%

A88(i'$&ion Pro-i(e - A Media St*rage A: :li+ati*n , r*4ile de4ines a sele+ti*n *4 +h*i+es at the vari*'s layers *4 the DI" ! M Media St*rage M*del ; hi+h are a: :li+a3le t* a s:e+i4i+ need *r +*nteJt in ; hi+h the 2edia inter+hange is intended t* 3e :er4*r2ed%

Asso'i$&ion B a net ; *r- +*2 2'ni+ati*n +hannel set ': 3et ; een %

Asso'i$&ion Es&$0(is= , en& - an Ass*+iati*n Esta3lish2ent is the 4irst :hase *4 +*2 2'ni+ati*n 3et ; een t ; * DI" ! M A: :li+ati*n Entities% $he AEs 'se the Ass*+iati*n Esta3lish2ent t* neg*tiate h* ; data ; ill 3e en+*ded and the ty:e *4 data t* 3e eJ+hanged%

A&&ri0)&e B a 'nit *4 in4*r2ati*n in an *3)e+t de4initi*n% a data ele2ent identi4ied 3y a % $he in4*r2ati*n 2ay 3e a +*2 :leJ data str'+t're >Se<'en+e?& itsel4 +*2 :*sed *4 l* ; er level data ele2ents% EJa2 :lesF , atient ID >0010&0020?& A++essi*n N'23er >0000&00/0?& , h*t*2etri+ Inter:retati*n >0020&0004?& , r*+ed're "*de Se<'en+e >0000&1052?%

DICOM Fi(e For , $& - the DI" ! M @ile @*r2at :r*vides a 2eans t* en+a:s'late in a @ile the Data Set re:resenting a S ! , Instan+e related t* a DI" ! M In4*r2ati*n ! 3)e+t%

DICOM Mess$%e Ser.i'e E(e , en& 3DIMSE4 B a DIMSE de4ines the servi+es and :r*t*+*ls 'tili.ed 3y an A: :li+ati*n Entity t* eJ+hange 2essages%

Fi(e - a @ile is an *rdered string *4 .er* *r 2*re 3ytes& ; here the 4irst 3yte is at the

3eginning *4 the 4ile and the last 3yte is at the end *4 the @ile% @iles are identi4ied 3y an 'ni<'e @ile ID and 2ay 3y ;ritten& read& *r deleted%

Fi(e Me&$ In-or , $&ion - the @ile Meta In4*r2ati*n in+l'des identi4ying in4*r2ati*n *n the en+a:s'lated Data Set% It is a 2andat*ry header at the 3eginning *4 every DI" !M @ile%

In-or , $&ion O0>e'& De-ini&ion 3IOD4 - the s:e+i4ied set *4 that +*2:rise a ty:e *4 data *3)e+t% d*es n*t re:resent a s:e+i4i+ instan+e *4 the data *3)e+t& 3't rather a +lass *4 si2ilar data *3)e+ts that have the sa2e :r*:erties% $he 2ay 3e s:e+i4ied as Mandat*ry >$y:e 1?& Re<'ired 3't :*ssi3ly 'n-n*;n >$y:e 2?& *r !:ti*nal >$y:e 5?& and there 2ay 3e +*nditi*ns ass*+iated ;ith the 'se *4 an Attri3'te >$y:es 1" and 2"?% EJa2:lesF ,rint E*3 I! D%

?oin& P=o&o%r$8=i' E<8er&s Gro)8 3?PEG4 B a set *4 standardi.ed i2age +*2:ressi*n te+hni<'es& availa3le 4*r 'se 3y DI" !M a::li+ati*ns%

Mo*)(e B a set *4 ;ithin an that are l*gi+ally related t* ea+h *ther% EJa2:leF ,atient M*d'le in+l'des ,atient Na2e& ,atient ID& ,atient irth Date& and ,atient SeJ%

Ne%o&i$&ion B 4irst :hase *4 esta3lish2ent that all*;s t* agree *n the ty:es *4 data t* 3e eJ+hanged and h*; that data ;ill 3e en+*ded%

P=+si'$(Me*i$ - a :ie+e *4 2aterial ;ith re+*rding +a:a3ilities 4*r strea2s *4 3its%

inter*:era3ility s:e+i4i+ati*n% EJa2:lesF =ltras*'nd I2age St*rage Servi+e& asi+ Crays+ale ,rint Manage2ent%

Ser.i'e/O0>e'& P$ir 3SOP4 Ins&$n'e B an in4*r2ati*n *3)e+t% a s:e+i4i+ *++'rren+e *4 in4*r2ati*n eJ+hanged in a % EJa2:lesF a s:e+i4i+ J-ray i2age%

T$% B a 52-3it identi4ier 4*r a data ele2ent& re:resented as a :air *4 4*'r digit heJade+i2al n'23ers& the Ngr*':0 and the Nele2ent0% I4 the Ngr*':0 n'23er is *dd& the tag is 4*r a :rivate >2an'4a+t'rer-s:e+i4i+? data ele2ent% EJa2:lesF >0010&0020? P, atient ID0& >01@E&0010? P, iJel Data0& >001I&0210? P:rivate data ele2ent0

Tr$ns-er S+n&$< B the en+*ding 'sed 4*r eJ+hange *4 DI" !M in4*r2ati*n *3)e+ts and 2essages% EJa2:lesF +*2:ressed >i2ages?& little endian eJ:li+it val'e re:resentati*n%

Uni@)e I*en&i-ier 3UID4 B a gl*3ally 'ni<'e Nd*tted de+i2al0 string that identi4ies a s:e+i4i+ *3)e+t *r a +lass *4 *3)e+ts0 an IS!-0024 !3)e+t Identi4ier% EJa2:lesF St'dy Instan+e =ID& S!, "lass =ID& S!, Instan+e =ID%

M 9 #	M*dality 9 *r-list
NEMA	Nati*nal Ele+tri+al Man'4a+t'rers Ass*+iati*n
!	! :ti*nal >(ey Attri3'te?
, A "S	, i+t're Ar+hiving and "* 2 2 'ni+ati*n Syste2
, D=	, r*t*+*l Data =nit
R	Re<'ired >(ey Attri3'te?
RIS	Radi*l*gy In4*r2ati*n Syste2
S ",	Servi+e "lass , r*vider
S "=	Servi+e "lass =ser
S !,	Servi+e !3)e+t , air
SR	Str'+t'red Re:*rting
$ ", 6l,	$rans2issi*n "*ntr*l , r*t*+*l6Internet , r*t*+*l
=	=ni<'e >(ey Attri3'te?
=#	=: :er #ayer
7R	7al'e Re:resentati*n
=S	=ltras*'nd
=ID	=ni<'e Identi4ier

:.B Re-eren'es

DI " ! M A 'i+- C 'ide D @AA& Revisi*n 1%0 @inal $eJt& Mindray "*% #td

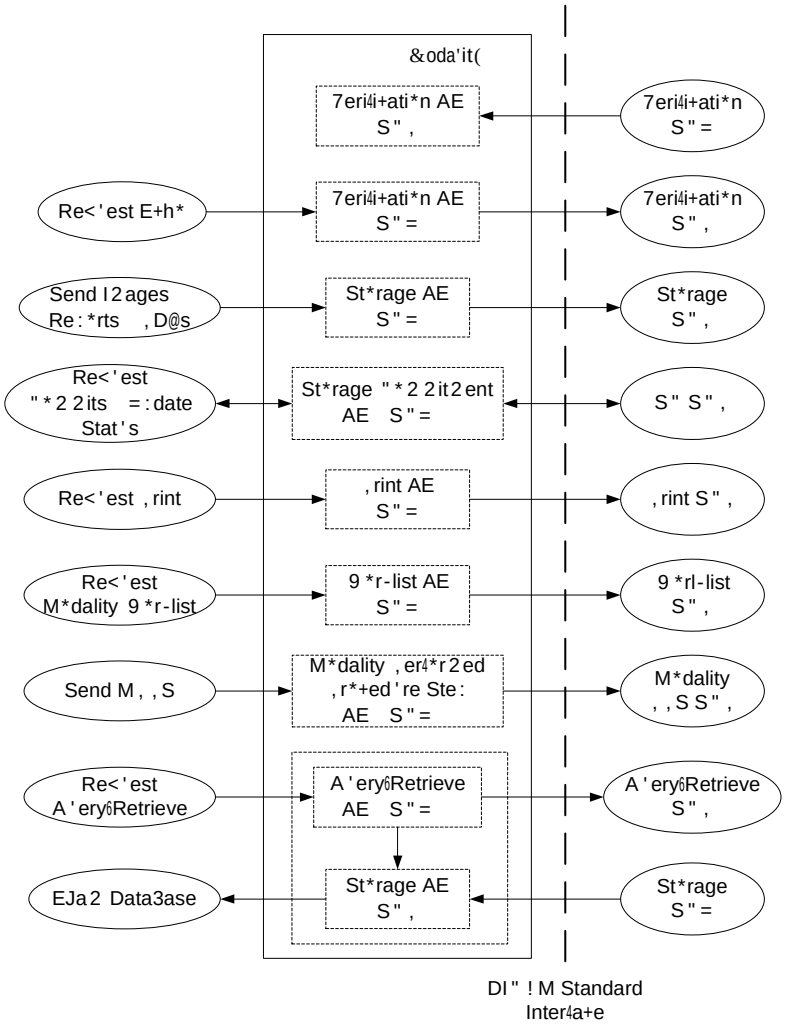
Digital I2aging and "* 2 2 'ni+ati*ns in Medi+ine >DI " ! M?& NEMA , S 5& availa3le 4ree at htt:F662edi+al%ne2a%*rg6

IHE $e+hni+al @ra2e ; *r-& availa3le 4ree at htt:F66 ; ; ;%ihe%net6

4 Ne& / or6in%

4." I , 8(e , en&$&ion Mo*e(

4."." A88(i'$&ion D$&$ F(o /



Fi%)re "

I , 8(e , en&$&ion Mo*e(

N*te

St*rage AE >as S" = and S" ,?

.88 75892700.988233(( )10.382(( )-0.988233( )16.316&-0.988233100.988233)1 10801(>)3.27144( )8233( )10. 81)2368 4 -664

$he *:erati*ns 4*r 2an'al st*rage servi+e are des+ri3ed 3el* ;F

!:erati*n 1

Ste: 1F Sele+t the i2ages 4r* 2 th'23nail 2en' in 2ain =I%

Ste: 2F ,ress NSend t*03'tt*n and sele+t DI"!M St*rage servi+e S",s%

Ste: 5F Send the i2age t* the DI"!M St*rage servi+e S",s%

!:erati*n 2

Ste: 1F Sele+t eJa2s in the iStati*n Dial*g%

Ste: 2F ,ress NSend EJa20 and sele+t DI"!M St*rage servi+e%

Ste: 5F Send the sele+ted eJa2s >2ay3e in+l'de i2ages& SRs& ,D@s? t* the DI"!M St*rage servi+e S",s%

!:erati*n 5

Ste: 1F Sele+t th'23nail in the iStati*n Dial*g%

Ste: 2F ,ress NSend t*03'tt*n and sele+t DI"!M St*rage servi+e S",s%

Ste: 5F Send the i2age t* the DI"!M St*rage servi+e S",s%

!:erati*n 4

Ste: 1F !:en the revie; dial*g and sele+t the i2ages%

Ste: 2F ,ress the NSend $*03'tt*n t* +h**se the st*rage S",s%

Ste: 5F Send the i2age t* the DI"!M St*rage servi+e S",s%

$he SR *nly +*'ld 3e sent in the +ir+'2stan+e as 3el* ;F

$he eJa2 ty:e is *3stetri+& gyne+*l*gy& +ardia+& vas+'lar& 3reast%

Table 4

3D/4D Transfer Option

5D64D !:ti*n	S*: "lass	S*: "lass =ID
N*r2al	#S)mage Storage	1.2.*40.1000*.+.1.4.1.1.6.1
	#S &u'tiframe)mage Storage	1.2.*40.1000*.+.1.4.1.1.3.1
7*l'2e	Enhan+ed =S 7*l'2e St*rage	1%2%040%10000%/%1%4%1%1%G%2
Ra;data	Ra; Data St*rage	1%2%040%10000%/%1%4%1%1%GG

$rans4er ;ith Ra;data 4*r2 is 2ainly 'sed 4*r 4D7ie;er t* get the ra; data *4 the i2age% $he St*rage S", re+eived the i2age +*'ld n*t revie; it 3e+a'se the i2age in4*r2ati*n is +*ded in :rivate 4*r2% 4D7ie;er *r D"0 Series Diagn*sti+ =ltras*'nd Syste2 +*'ld retrieve the 4ile and revie; it%

In the event that the 'ltras*'nd syste2 is ta-en *44 the net;*r- as a :*rta3le syste2 *r ;hen a net;*r- 4ail're *++'rs d'ring a 3a+-gr*'nd st*re& the St*rage S"= 2aintains a <'e'e *4 4ailed "-S$!RE re<'ests% I4 :re-+*n4ig'red *n ,reset =I& the 4ailed "-St*re re<'ests ;ill 3e a't*2ati+ally retried s:e+i4ied ti2es% I4 n* :re-+*n4ig'rati*n& the 'ser +an als* retry the 4ailed re<'ests 2an'ally%

As a S",& the St*rage AE +*'ld *nly 3e 'sed in A'ery6Retrieve& *ther;ise +*'ldn$t%

4.".!.: S&or$%e Co , ,i& ,en& AE

$he St*rage "*22it2ent AE *riginates ass*+iati*ns t* ens're the relia3le st*rage *4 DI"!M +*2:*site in4*r2ati*n *3)e+ts *n re2*te DI"!M devi+e a4ter sending DI"!M St*rage Servi+e t* the devi+e%

$he St*rage "*22it2ent servi+e ;ill 3e eJe+'ted a't*2ati+ally in the +ir+'2stan+e as 3el*;F

$he St*rage "*22it2ent Servi+e is set t* ass*+iate ;ith the St*rage Servi+e in DI"!M st*rage servi+e :reset dial*g and the ass*+iated St*rage Servi+e is eJe+'ted% EJa2 is the 'nit t* send%
$he stat's *4 the eJa2 is REndR% It ;*'ld n*t 3e eJe+'ted ;hen an RA+tiveR& R,a'sedR *r R"an+elledR eJa2 is sele+ted%

4.".!.4 Prin& AE

As a S"=& the ,rint AE *riginates ass*+iati*ns 4*r the :rint *4 DI"!M =ltras*'nd single 4ra2e i2ages and se+*ndary +a:t're i2ages t* re2*te AE >sele+ted 4r*2 a :re-+*n4ig'red list?%

$he syste2 is +a:a3le *4 grays+ale > 69? and +*l*r :rint s'::*rting ;ith a't*2ati+ and 2an'al :rint 4'n+ti*ns%

Ste: 2F ,ress the NSend $*0 3'tt*n t* +h**se the :rint S",s%

Ste: 5F Send the i2age t* the DI"!M :rint servi+e S",s%

4."!.A 1or6(is& AE

$he 9*r-list AE is a+tivated thr*'gh the 9*r-list =I ;hen the 'ser sele+ts a re2*te AE t* <'ery >4r*2 a :re-+*n4ig'red list?%$he syste2 s'::*rts a't*2ati+ and 2an'al <'ery de:ending *n its +*n4ig'rati*n *n ,reset =I% $he syste2 s'::*rts 4'..y <'ery 'sing NU0 and NV0%

I4 set *ne and *nly *ne re2*te AE t* 3e de4a'lt stat's% $he syste2 +an initiate a <'ery ;ith de4a'lt r'les ;hen sh*; the 9*r-list =I% $he 9*r-list Server is the de4a'lt server% $he M*dality $y:e is =S& the EJa2 Date is t*day& and the S+hed'led Stati*n AE $itle is 3lan-%

Alternatively i4 the de4a'lt stat's is n*& the 'ser +an s:e+i4y <'ery r'les *n 9*r-list =I% S'+h as ,atient ID& ,atient Na2e& A++essi*n N'23er& Re<'ested ,r*+ed're ID& 9*r-list Server& EJa2 Date& M*dality $y:e and S+hed'led Stati*n AE $itle%

I4 n* 2at+hes are 4*'nd& a dial*g'e ;ill 3e :resented t* the 'ser t* indi+ate s*% $he :*ssi3le reas*ns 4*r this 4ail're are listed t* hel: tr*'3le sh**ting%

I4 2*re than *ne 2at+hing :atients 4*'nd& 'ser +an dis+*ver lists n'23er *n the =I% $he 'ser +an als* +hange <'ery r'les 4*r an*ther <'ery& *r 4*r 4'rther 4ilter in l*+al data3ase t* l*+ate the :atients <'i+-ly% And the lists +an 3e s*rted in as+ending *r des+ending *rder%

4."!.B MPPS AE

M,,S AE sends event transa+ti*ns that 4a+ilitate the trans4er *4 eJa2 :r*+ed're stat's 4r*2 the 'ltras*'nd syste2 t* the in4*r2ati*n syste2%

M,,S 2essages are sent 4r*2 the syste2 'nder the 4*ll*;ing +ir+'2stan+esF

M,,S N-"reate& Stat's W IN ,R!CRESS% Starting a ne; eJa2 *r rea+tive an eJa2 res'lt in a't*2ated +reati*n *4 an M,,S Instan+e 2anaged 3y a re2*te AE%
M,,S N-Set& Stat's W "!M,#E$E% "*2:leti*n *4 the M,,S is :er4*r2ed as the res'lt *4 an *:erat*r a+ti*n *4 ending the eJa2%
M,,S N-Set& Stat's W DIS"!N$IN=ED% N"an+el EJa20 +a'ses the NDis+*ntin'ed0 stat's t* 3e sent% =ser +an sele+t vari*'s reas*ns 4r*2 the NReas*n *4 +an+el EJa20 =I ;hen need t* +an+el an eJa2%

4."!.D 5)er+/Re&rie.e AE

$he A'ery6Retrieve AE s'::*rts the A'ery6Retrieve servi+es as an S"=%

As a A'ery S"=& the syste2 initiates a "-@ind re<'est t* the re2*te S",i4 :re-+*n4ig'red *n the ,reset =I& and then <'ery is inv*-ed dire+tly 3y the 'ser% $he syste2 s'::*rts 4'..y <'ery 'sing NU0 and NV0%

@*r re2*te AE& n* 2atter ; hat the de4a'lt stat's is& the 'ser +an s:e+i4y <'ery r'les *n A'ery6Retrieve =I% S'+h as , atient ID& , atient Na2e& A++essi*n N'23er& EJa2 Date and sele+t Sear+h (ey% I4 n* 2at+hes are 4*'nd& a dial*g'e ; ill 3e :resented t* the 'ser t* indi+ate s*% $he 'ser +an als* +hange <'ery r'les 4*r an*ther <'ery& *r 4*r 4'rther 4ilter in I*+al data3ase t* I*+ate the :atients <'i+-ly%

As a M*ve S"=& the syste2 s'::*rts the St'dy R**t A'ery M*del% $he styste2 +an *nly retrieve 'ltras*'nd i2ages *r str'+ted re:*rts& ; h*se 2*dality atrri3'tes are R=SR *r RSRR& 3't ; ill lea: all the *ther *nes% @'rther2*re& the retrieval destinati*n is *nly I*+al h*st%

$he syste2 initiates a "-M!7E re<'est t* the re2*te Retrieve S", ; hen 'ser sele+ts ite2s t* retrieve% $he re2*te Retrieve S", in t'rn starts "-S$!RE s'3 *:erati*ns t* the 'ltras*'nd syste2%

=ser +an dis+*ver lists n'23er 4*r <'eried ite2s& as ; ell as retrieval ite2s% And the lists +an 3e s*rted in as+ending *r des+ending *rder%

$he syste2 +an retrieve the 5D64D i2ages that have sent t* ,A"S *r *ther St*rage S", in ra ; data 4*r2% A4ter retrieveing& the syste2 +an +*nvert it t* the identi4ia3le 4*r2at and revie ; it%

4.": Se@)en'e o- Re$(1or(* A'&i.i&ies

All S", a+tivities are :er4*r2ed asyn+hr*n*'sly in the 3a+-gr*'nd and n*t de:endent *n any se<'en+ing%

All S"= a+tivities are se<'entially initiated in the 'ser inter4a+e& and an*ther a+tivity 2ay n*t 3e initiated 'ntil the :ri*r a+tivity has +*2:leted%

4.! AE S8e'i-i'$&ions

4.!." Mo*$(i&+ AE

4.!."." SOP C($sses

$he 'ltras*'nd syste2 :r*vides Standard "*n4*r2an+e t* the 4*ll* ; ing S!, "lassF

Table 5
SOP Class for Modality AE

SOP Class Name	SOP Class UID	SCU	SCP
, erification SO- C'a..	1.2.*40.1000*.1.1	/e.	/e.
#S)mage Storage	1.2.*40.1000*.+.1.4.1.1.6.1	/e.	/e.[1]
#S &u'tiframe)mage Storage	1.2.*40.1000*.+.1.4.1.1.3.1	/e.	/e.[1]

Secondar(Ca$ture)mage Storage	1.2.*40.1000*.+.1.4.1.1.7	/e.	/e.[1]
Com$rehen.i0e Structured 1e$ort Storage	1.2.*40.1000*.+.1.4.1.1.**.33	/e.	/e.[1]
2nca$.u'ated -D! Storage	1.2.*40.1000*.+.1.4.1.1.104.1	/e.	/e.[1]
Enhan+ed =S 7*I' 2e St*rage	1%2%040%10000%/%1%4%1%1%G%2	/e.	3o
Ra; Data St*rage	1%2%040%10000%/%1%4%1%1%GG	/e.	/e.
Storage Commitment -u.h &ode'	1.2.*40.1000*.1.20.1	/e.	3o
4a.ic 5ra(.ca'e -rint &anagement &eta	1.2.*40.1000*.+.1.1.6	/e.	3o
4a.ic Co'or -rint &anagement &eta SO- C'a..	1.2.*40.1000*.+.1.1.1*	/e.	3o
4a.ic !i'm Se..ion SO- C'a..	1.2.*40.1000*.+.1.1.1	/e.	3o
4a.ic !i'm 4o7 SO- C'a..	1.2.*40.1000*.+.1.1.2	/e.	3o
4a.ic 5ra(.ca'e)mage 4o7 SO- C'a..	1.2.*40.1000*.+.1.1.4	/e.	3o
-rinter SO- C'a..	1.2.*40.1000*.+.1.1.16	/e.	3o
-rint Jo" SO- C'a..	1.2.*40.1000*.+.1.1.14	/e.	3o
&oda'it(8or9'i.t)nformation &ode' !ind	1.2.*40.1000*.+.1.4.31	/e.	3o
&oda'it(-erformed -rocedure Ste$ SO- C'a..	1.2.*40.1000*.3.1.2.3.3	/e.	3o
Stud(1oot :uer(/1etrie0e)nformation &ode'; !ind	1.2.*40.1000*.+.1.4.1.2.2.1	/e.	3o
Stud(1oot :uer(/1etrie0e)nformation &ode'; &o0e	1.2.*40.1000*.+.1.4.1.2.2.2	/e.	3o

N*te 1 Yes *nly 'sed in A'ery6Retrieve& *ther; ise N*%

4.!."."! Asso'i$&ion Es&$0(is=, en& Po(i'ies

4.!."."!."Gener$(

$he DI"!M standard a::li+ati*n +*nteJt na2e 4*r DI"!M 5%0 is al; ays :r*:*sedF

Table 6

DICOM Application Context for Modality AE

A$$'ication Conte7t 3ame	1.2.*40.1000*.3.1.1.1

$he ,D= si.e is +*n4ig'ra3le ;ith a 2ini2'2 si.e *4 1G&504 and a 2aJi2'2 si.e *4 G/&/5G% $he de4a'lt ,D= si.e is 52&1G0%

4.!."."!."!N),0er o- Asso'i$&ions

$he syste2 initiates *ne Ass*+iati*n at a ti2e 4*r ea+h destinati*n t* ;hi+h a trans4er re<'est is 3eing :r*+essed in the a+tive)*3 <'e'e list% Sin+e St*rage and ,rint tas-s are eJe+'ted ;ithin a sa2e thread& ;hen they are sele+ted si2'ltane*'sly& *nly *ne)*3 ;ill 3e a+tive at a ti2e& the *ther>s? re2ain :ending 'ntil the a+tive)*3 is s'++ess4'l *r 4ailed%

Table 7

Number of Associations as an Association Initiator

&a7imum num"er of .imu'taneou. a..ociation.	1

Table 8
Number of Associations as an Association Acceptor

&a7imum num"er of .imu'taneou. a..ociation.	1

4.!."."!.: As+n'=rono)s N$&)re

$he 'ltras*'nd syste2 ; ill *nly all* ; a single *'tstanding *:erati*n *n an ass*+iati*n%

4.!."."!.4I , 8(e , en&$&ion I*en&i-+in% In-or , $&ion

Table 9
DICOM Implementation Class and Version for Modality AE

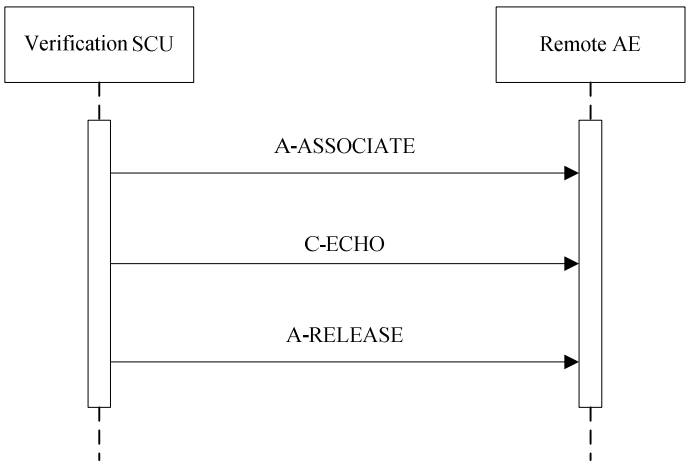
)m$'ementation C'a.. #)D	1.2.1+6.112+36.1.2120.0.1.0.1
)m$'ementation , er.ion 3ame	&)3D1A/<, 1.0

4.!."." Asso'i$&ion Ini&i$&ion Po(i'+

4.!."."."A'&i.i&+ E Re@)es& E'=o

4.!."."."Des'ri8&ion $n* Se@)en'in% o- A'&i.i&ies

$he 'ser +an veri4y the eJisten+e *4 a DI" !M server *n the h*s:itals net ; *r-& thr*'gh a 3'tt*n in the ⟩DI" !M Servi+eH s+reen% 9 hen the 'ser :resses this 3'tt*n& the 'ltras*'nd syste2 ; ill initiate the ass*+iati*n%



Fi%)re !
Se@)en'in% o- A'&i.i&+ E Sen* E'=o Re@)es&

4.!."."."!Pro8ose* Presen&$&ion Con&e<&s

$he 7eri4i+ati*n AE ⟩as S"=? s':: *rts the 4*ll* ; ing , resentati*n "*nteJts 4*r 7eri4i+ati*n%

Table 10
Presentation Contexts for Verification

PROPOSED PRESENTATION CONTEXTS					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name**	**UID**		
, erification	1.2.*40.1000*.1.1	)m$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2	SC#	3one
		27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1	SC#	3one
		27$'icit , 1 4ig 2ndian	1.2.*40.1000*.1.2.2	SC#	3one

4.!."..:."..::SOP S8e'i-i' Con-or , $n'e

It s'22ari.es the 3ehavi*r *4 =ltras*'nd Syste2 ;hen re+eiving stat's +*des in a "-E"H! res:*nse%

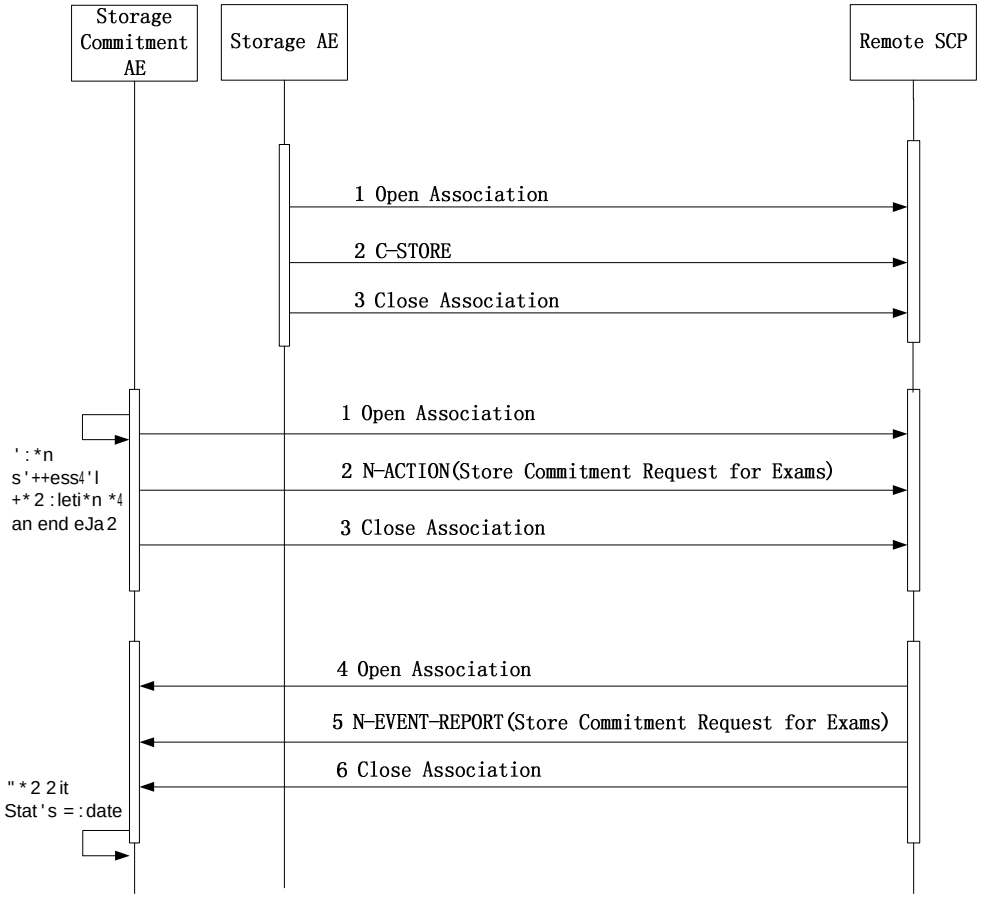
T$0(e ""

Veri-i'$&ion C-E'=o Res8onse S&$&)s ;$n*(in% 9e=$.ior

Service Status	Further Meaning	Error Code	Behavior (as SCU)
Succe..	Succe..	0000	De0ice Statu. i. .et to› , erif(Succe..fu'
1efu.ed	Out of 1e.ource.	A7??	De0ice Statu. i. .et to› , erif(!ai'ed
!ai'ed	#na"'e to $roce..	C???	De0ice Statu. i. .et to› , erif(!ai'ed
@	@	An(other .tatu. code	De0ice Statu. i. .et to› , erif(!ai'ed

4.!."..:.!A'&i.i&+ E S&ore i , $%es7 SRs7 PDFs

$he ! and Cyn eJa2 ty:es +reate ! -CYN =ltras*'nd ,r*+ed're Re:*rts%
$he Ad'lt "ard eJa2 ty:e +reates Ad'lt E+h*+ardi*gra:hy Re:*rts%
$he A3d& =r* and 7as eJa2 ty:es +reate 7as+'lar Re:*rts
$he reast eJa2 ty:es +reate reast I2aging Re:*rts%



Fi%)re :

Sequencing of Activity – Send Storage Request

4.!."..:.!.!Pro8ose* Presen&$&ion Con&e<&s

I4 St*rage AE is *44ered a +h*i+e *4 $rans4er SyntaJes in the a++e:ted ,resentati*n "*nteJts& it ;ill a::ly the 4irst en+*'ntered t* 'se 4*r the "-S$!RE *:erati*n% As t* "*2:ress $rans4er SyntaJes& it ;ill a::ly the 'ser +*n4ig'red *ne%

Table 12

Proposed Presentation Contexts for Storage

PROPOSED PRESENTATION CONTEXTS					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name**	**UID**		
#S)mage Storage	1.2.*40.100 0*.+.1.4.1.1 .6.1	)m$'icit ,1 =itt'e 2ndian	1.2.*40.1000*.1.2	SC#	3one
		27$'icit ,1 =itt'e 2ndian	1.2.*40.1000*.1.2.1	SC#	3one
		J-25 =o..(,4a.e'ine	1.2.*40.1000*.1.2.4.	SC#	3one

SeAuentia' Bith Cuffman +0
Coding D-roce.. 1E

		27$'icit , 1 4ig 2ndian	1.2.*40.1000*.1.2.2	SC#	3one
		J-25 =o..'e.., 3on;Cierarchica', !ir.t;Order -rediction D-roce.. 14 FSe'ection , a'ue 1GE	1.2.*40.1000*.1.2.4.70	SC#	3one
		1=2 =o..'e..	1.2.*40.1000*.1.2.+	SC#	3one
		J-25 2000)mage Com$re..ion D=o..'e.. On'(E	1.2.*40.1000*.1.2.4.60	SC#	3one
		J-25 2000)mage Com$re..ion	1.2.*40.1000*.1.2.4.61	SC#	3one
Com$rehen.i 0e Structured 1e$ort Storage	1.2.*40.1000*.+.1.4.1.1.**.33	)m$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2	SC#	3one
		27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1	SC#	3one
		J-25 =o..(, 4a.e'ine SeAuentia' Bith Cuffman Coding D-roce.. 1E	1.2.*40.1000*.1.2.4.+0	SC#	3one
		27$'icit , 1 4ig 2ndian	1.2.*40.1000*.1.2.2	SC#	3one
		J-25 =o..'e.., 3on;Cierarchica', !ir.t;Order -rediction D-roce.. 14 FSe'ection , a'ue 1GE	1.2.*40.1000*.1.2.4.70	SC#	3one
		1=2 =o..'e..	1.2.*40.1000*.1.2.+	SC#	3one
		J-25 2000)mage Com$re..ion D=o..'e.. On'(E	1.2.*40.1000*.1.2.4.60	SC#	3one
		J-25 2000)mage Com$re..ion	1.2.*40.1000*.1.2.4.61	SC#	3one
2nca$.u'ated -D! Storage	1.2.*40.1000*.+.1.4.1.1.104.1	)m$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2	SC#	3one
		27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1	SC#	3one
		J-25 =o..(, 4a.e'ine SeAuentia' Bith Cuffman Coding D-roce.. 1E	1.2.*40.1000*.1.2.4.+0	SC#	3one
		27$'icit , 1 4ig 2ndian	1.2.*40.1000*.1.2.2	SC#	3one
		J-25 =o..'e.., 3on;Cierarchica',	1.2.*40.1000*.1.2.4.70	SC#	3one

		!ir.t;Order -rediction D-roce.. 14 FSe'ection , a'ue 1GE			
		1=2 =o..'e..	1.2.*40.1000*.1.2.+	SC#	3one
		J-25 2000)mage Com$re..ion D=o..'e.. On'(E	1.2.*40.1000*.1.2.4.60	SC#	3one
		J-25 2000)mage Com$re..ion	1.2.*40.1000*.1.2.4.61	SC#	3one
Enhan+ed =S 7*I' 2e St*rage	1%2%040%10000%/%1%4%1%1%G%2	)m$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2	SC#	3one
		27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1	SC#	3one
		J-25 =o..(, 4a.e'ine SeAuentia' Bith Cuffman Coding D-roce.. 1E	1.2.*40.1000*.1.2.4.+0	SC#	3one
		27$'icit , 1 4ig 2ndian	1.2.*40.1000*.1.2.2	SC#	3one
		J-25 =o..'e.., 3on;Cierarchica', !ir.t;Order -rediction D-roce.. 14 FSe'ection , a'ue 1GE	1.2.*40.1000*.1.2.4.70	SC#	3one
		1=2 =o..'e..	1.2.*40.1000*.1.2.+	SC#	3one
		J-25 2000)mage Com$re..ion D=o..'e.. On'(E	1.2.*40.1000*.1.2.4.60	SC#	3one
		J-25 2000)mage Com$re..ion	1.2.*40.1000*.1.2.4.61	SC#	3one
Ra; Data St*rage	1%2%040%10000%/%1%4%1%1%GG	)m$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2	SC#	3one
		27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1	SC#	3one
		J-25 =o..(, 4a.e'ine SeAuentia' Bith Cuffman Coding D-roce.. 1E	1.2.*40.1000*.1.2.4.+0	SC#	3one
		27$'icit , 1 4ig 2ndian	1.2.*40.1000*.1.2.2	SC#	3one
		J-25 =o..'e.., 3on;Cierarchica', !ir.t;Order -rediction D-roce.. 14 FSe'ection , a'ue 1GE	1.2.*40.1000*.1.2.4.70	SC#	3one
		1=2 =o..'e..	1.2.*40.1000*.1.2.+	SC#	3one
		J-25 2000)mage Com$re..ion D=o..'e..	1.2.*40.1000*.1.2.4.60	SC#	3one

		On'(E			
		J-25 2000)mage Com$re..ion	1.2.*40.1000*.1.2.4.61	SC#	3one

4.!."..:.!.: SOP S8e'i-i' Con-or , $n'e

St*rage AE :r*vides Standard "*n4*r2an+e t* the St*rage Servi+e "lass%

St*rage AE ;ill 3ehave as des+ri3ed in the $a3le 3el* ; in res:*nse t* the stat's ret'rned in the "-S$!RE res:*nse +*2 2and 2essage%

T$0(e ":

S&or$%e C-STORE Res8onse S&$&)s ;$n*(in% 9e=$.ior

Service Status	Further Meaning	Error Code	Behavior
Succe..	Succe..	0000	)mage tran.mi..ion i. .ucce..fu', Hhe .tatu. code i. 'ogged and the ta.9 .ucce.. i. re$orted to the u.er 0ia ta.9 management.
1efu.ed	Out of 1e.ource.	A777	Hhe a..ociation i. a"orted u.ing A;A4O1H and the .end ta.9 i. mar9ed a. fai'ed. Hhe rea.on i. 'ogged and,)f u.er .e'ect. the fai'ed ta.9, the rea.on. for thi. fai'ure Bi'' "e .hoBed 0ia ta.9 management.
2rror	Data Set doe. not match SO-C'a..	A677	Hhe a..ociation i. a"orted u.ing A;A4O1H and the .end ta.9 i. mar9ed a. fai'ed. Hhe rea.on i. 'ogged and,)f u.er .e'ect. the fai'ed ta.9, the rea.on. for thi. fai'ure Bi'' "e .hoBed 0ia ta.9 management.
2rror	Cannot #nder.tand	C777	Hhe a..ociation i. a"orted u.ing A;A4O1H and the .end Io" i. mar9ed a. fai'ed. Hhe rea.on i. 'ogged and,)f u.er .e'ect. the fai'ed ta.9, the rea.on. for thi. fai'ure Bi'' "e .hoBed 0ia ta.9 management.
!ai'ure	An(other fai'ure	7777	Hhe a..ociation i. a"orted u.ing A;A4O1H and the .end Io" i. mar9ed a. fai'ed. Hhe rea.on i. 'ogged and,)f u.er .e'ect. the fai'ed ta.9, the rea.on. for thi. fai'ure Bi'' "e .hoBed 0ia ta.9 management.
8arning	Coercion of Data 2'ement.	4000	)mage tran.mi..ion i. con.idered .ucce..fu' "ut the .tatu. meaning i. 'ogged.
	Data Set doe. not match SO-C'a..	4007	)mage tran.mi..ion i. con.idered .ucce..fu' "ut the .tatu. meaning i. 'ogged.
	2'ement. Di.carded	4006	)mage tran.mi..ion i. con.idered .ucce..fu' "ut the .tatu. meaning i. 'ogged.
	An(other .tatu. code.	7777	Hhe A..ociation i. a"orted u.ing A;A4O1H and the .end Io" i. mar9ed a. fai'ed. Hhe .tatu. code i. 'ogged

			and the Io" fai'ure i. re$orted to the u.er 0ia ta.9 management.

$he 3ehavi*r d'ring +* 2 2 'ni+ati*n 4ail're is s' 2 2ari.ed in the $a3le 3el* ; F

T$0(e "4

S&or$%e Co , ,)ni'$&ion F$i()re 9e=$.ior

Exception	Behavior
Himeout	Hhe A..ociation i. a"orted u.ing A;A4O1H and the .end Io" i. mar9ed a. fai'ed. Hhe rea.on i. 'ogged and the Io" fai'ure i. re$orted to the u.er 0ia ta.9 management.
A..ociation a"orted "(the SC- or netBor9 'a(er.	Hhe .end Io" i. mar9ed a. fai'ed. Hhe rea.on i. 'ogged and the Io" fai'ure i. re$orted to the u.er 0ia ta.9 management.

$he 4*ll* ; ing ta3les :r*vide the list *4 attri3'tes re<'ested in the St*rage%

T$0(e "A

US I , $%e IOD

IE	Mo*)(e
, atient	, atient
St'dy	Ceneral St'dy
	, atient St'dy
Series	Ceneral Series
E<'i: 2ent	Ceneral E<'i: 2ent
I2age	Ceneral I2age
	I2age , iJel
	=S Regi*n "ali3rati*n
	=S I2age
	S!, "*2 2*n

T$0(e "B

US M)(&i-Fr$, e I , $%e IOD

IE	Mo*)(e
, atient	, atient
St'dy	Ceneral St'dy
	, atient St'dy
Series	Ceneral Series
E<'i: 2ent	Ceneral E<'i: 2ent
I2age	Ceneral I2age
	I2age , iJel
	"ine
	M'lti-4ra2e
	=S Regi*n "ali3rati*n
	=S I2age
	S!, "*2 2*n

T$0(e "D

SC I , $%e IOD

IE	Mo*)(e
, atient	, atient
St'dy	Ceneral St'dy
	, atient St'dy
Series	Ceneral Series
E<'i: 2ent	Ceneral E<'i: 2ent
	S" E<'i: 2ent
I2age	Ceneral I2age
	I2age , iJel
	S" I2age
	S!, "*2 2*n

T$0(e "8

En'$8s)($&e* PDF IOD

IE	Mo*)(e
,atient	,atient
St'dy	Ceneral St'dy
	,atient St'dy
Series	En+a:s'lated D*+'2ent
E<'i:2ent	Ceneral E<'i:2ent
	S" E<'i:2ent
En+a:s'lated D*+'2ent	En+a:s'lated D*+'2ent
	S!, "*2 2*n

T$0(e "#

R$ / D$&$ IOD

IE	Mo*)(e
,atient	,atient
St'dy	Ceneral St'dy
	,atient St'dy
Series	Ceneral Series
E<'i:2ent	Ceneral E<'i:2ent
Ra; Data	A+<'isiti*n "*nteJt
	Ra; Data
	S!, "*2 2*n

T$0(e !

En=$n'e* US Vo() ,e IOD

IE	Mo*)(e
,atient	,atient
St'dy	Ceneral St'dy
	,atient St'dy
Series	Ceneral Series
	Enhan+ed =S Series
@ra2e *4 Re4eren+e	@ra2e *4 Re4eren+e
	=ltras*'nd @ra2e *4 Re4eren+e
	Syn+hr*ni.ati*n
E<'i:2ent	Ceneral E<'i:2ent
	Enhan+ed Ceneral E<'i:2ent
I2age	Ceneral I2age
	I2age ,iJel
	M'lti-4ra2e @'n+ti*nal Cr*':s
	M'lti-4ra2e Di2ensi*n

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
>0000&00G0?	CS	1	M*dality	L#SM
>0020&000E?	#)	1	Series Instan+e =ID	A#HO
>0020&0011?	)S	1	Series N'23er	A#HO
>0000&105E?	=O	3	Serie. De.cri$tion	& 8 =/#S21
D0040,027+E	S:	3	1eAue.t Attri"ute. SeAuence	& 8 =
D0040,1001E	SC	1C	O1eAue.ted -rocedure)D	& 8 =
D0040,0006E	SC	1C	OSchedu'ed -rocedure Ste$)D	& 8 =
>0040&0001?	=O	3	YS+hed'led ,r*+ed're Ste: & 8 = Des+ri:ti*n	& 8 =
>0040&0000?	S:	3	YS+hed'led ,r*t*+*l "*de Se<'en+e	& 8 =
D000*,0100E	SC	1C	OOCode ,a'ue	& 8 =
>0000&0102?	SC	1C	YY"*ding S+he2e designat*r	& 8 =
>0000&0105?	SC	1C	YY"*ding S+he2e 7ersi*n	& 8 =
>0000&0104?	=O	1C	YY"*de Meaning	& 8 =

T$0(e !B

En=$n'e* US Series Mo*)(e

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
>0000&00G0?	"S	1	M*dality	N=S0
>0000&1111?	SA	1"	Re4eren+ed , er4*r2ed , r*+ed're Ste: Se<'en+e	M , , S
>0040&02G0?	SA	1"	, er4*r2ed , r*t*+*l "*de Se<'en+e	& 8 =

T$0(e !D

Fr$, e o- Re-eren'e Mo*)(e

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
>0020&00/2?	=I	1	@*4 Re4eren+e =ID	A=$!
>0020&1040?	# !	2	, *siti*n Re4eren+e Indi+at*r	Set to Kero 'ength

T$0(e !8

U(&r$so)n6 r0154f.99695(n6 r0154f6 re96 T)4.94671(X)500.$4n5*576

> & #

				@ra2e *4 Re4eren+e%
>0020&I50I?	@D	1	7*l'2et* $ransd'+er Ma::ing MatriJ	

D000*,1040E	=O	3	)n.titutiona' De$artment 3ame	CO3!)5

T$0(e : :

Gener$(I , $%e Mo*)(e

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
D000*,0023E	DA	2C	Content Date	A#HO
D000*,0033E	H&	2C	Content Hime	A#HO
D000*,2111E	SH	3	Deri0ation De.cri$tion	CO3!)5, defau't i. .et to Kero 'ength
D0020,0013E	)S	2	)n.tance 3um"er	A#HO
D0020,0020E	CS	2C	-atient Orientation	Set to Kero 'ength
D0020,4000E	=H	3	)mage Comment.	Set to Kero 'ength
D002*,0301E	CS	3	4urned)n Annotation	L/2SM

T$0(e :4

US I , $%e Mo*)(e

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
D000*,000*E	CS	2	)mage H($e	LO1)5)3A=/-1)&A1/M
D001*,+010E	=O	3	Hran.ducer Data	#S21
D001*,+020E	=O	3	-roce..ing !unction	#S21
D002*,0002E	#S	1	Sam$'e. $er -i7e'	1 or 3
D002*,0004E	CS	1	-hotometric)nter$retation	L154M, for co'or image. L&O3OCC1O&22M, if the image i. gra(.ca'e L/41<!#==<422M, if the image i. .ent u.ing J-25. L154M, if the image i. .ent u.ing J-25 =o..'e... L/41<!#==M, if the image i. .ent u.ing 1=2 =o..'e... L/41<)CHM, if the image i. .ent u.ing J-25 2000)mage Com$re..ion. L/41<1CHM,if the image i. .ent u.ing J-25 2000)mage Com$re..ion D=o..'e.. On'(E

D002*,0006E	#S	1C	-'anar Configuration	1, if the image i. .ent u.ing 1=2 =o..'e.. 0 otherBi.e.
D002*,0006E	AH	1C	!rame)ncrement -ointer	!rame Hime
D002*,0014E	#S	3	#'tra.ound Co'or Data -re.ent	0 or 1
D002*,0100E	#S	1	4it. A''ocated	07000*
D002*,0101E	#S	1	4it. Stored	07000*
D002*,0102E	#S	1	Cigh 4it	070007
D002*,0103E	#S	1	-i7e' 1e$re.entation	070000
D002*,2110E	CS	1C	=o..( )mage Com$re..ion	3ot u.ed if image i. uncom$re..ed .u$$ort J-25 "a.e'ine, J-25 =o..'e..,1=2 =o..'e..,J-25 2000)mage Com$re..ion,J-25 2000)mage Com$re..ion D=o..'e.. On'(E $roce..1 and .et it to L01M

T$0(e :A

SC I , $%e Mo*)(e

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
D001*,1012E	DA	3	Date *4 Se+*ndary "a:t're	A#HO
>0010&1014?	H&	3	$i2e *4 Se+*ndary "a:t're	A#HO

T$0(e :B

I , $%e Pi<e(Mo*)(e

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
D002*,0010E	#S	1	1oB.	CO3!)5
D002*,0011E	#S	1	Co'umn.	CO3!)5
D002*,0034E	)S	1c	-i7e' A.$ect 1atio	Set to Kero 'ength
D7!20,0010E	O 8	1	-i7e' Data	

T$0(e :D

SOP Co , ,on Mo*)(e

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
D000*,000+E	CS	1C	S$ecific Character Set	A#HO
D000*,0012E	DA	3	)n.tance Creation Date	A#HO
D000*,0013E	H&	3	)n.tance Creation Hime	A#HO
D000*,0016E	#)	1C	SO- C'a.. #)D	A#HO
D000*,001*E	#)	1C	SO-)n.tance #)D	A#HO

T$0(e :8

US Re%ion C$(i0r$&ion Mo*)(e

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
D001*,6011E	S:	1	SeAuence of #'tra.ound 1egion.	
OD001*,6012E	#S	1	1egion S$atia' !ormat	Set "(the .(.tem
OD001*,6014E	#S	1	1egion Data H($e	Set "(the .(.tem
OD001*,6016E	#=	1	1egion !'ag.	Set "(the .(.tem
OD001*,601*E	#=	1	1egion =ocation &in ?0	Set "(the .(.tem
OD001*,601AE	#=	1	1egion =ocation &in /0	Set "(the .(.tem
OD001*,601CE	#=	1	1egion =ocation &a7 ?1	Set "(the .(.tem
OD001*,6012E	#=	1	1egion =ocation &a7 /1	Set "(the .(.tem
OD001*,6024E	#S	1	-h(.ica' #nit. ? Direction	Set "(the .(.tem
OD001*,6026E	#S	1	-h(.ica' #nit. / Direction	Set "(the .(.tem
OD001*,6020E	S=	3	1eference -i7e' 70	Set "(the .(.tem
OD001*,6022E	S=	3	1eference -i7e' 70	Set "(the .(.tem

OD001*,602*E	!D	3	1ef. -i7e' -h(.ica' ,a'ue ?	Set "(the .(.tem
OD001*,602AE	!D	3	1ef. -i7e' -h(.ica' ,a'ue /	Set "(the .(.tem
OD001*,602CE	!D	1	-h(.ica' De'ta ?	Set "(the .(.tem
OD001*,6022E	!D	1	-h(.ica' De'ta /	Set "(the .(.tem

T$0(e :#

Cine Mo*)(e Use* -or US M)(&i-Fr$, e l , $%es On(+

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
D000*,2142E	)S	3	Start Hrim	Set "(the .(.tem
D000*,2143E	)S	3	Sto$ Hrim	Set "(the .(.tem
D000*,2144E	)S	3	1ecommended Di.$'a(!rame 1ate	Set "(the .(.tem
D001*,0040E	)S	3	Cine 1ate	CO3!)5
D001*,0072E	DS	3	2ffecti0e Duration	Set "(the .(.tem
D001*,1063E	DS	1C	!rame Hime	Set "(the .(.tem
D001*,106+E	DS	1C	!rame Hime ,ector	Set "(the .(.tem
D001*,1066E	DS	3	!rame De'a(	Set "(the .(.tem
D001*,1242E	)S	3	Actua' !rame Duration	Set "(the .(.tem
D001*,1244E	#S	3	-referred -'a("ac9 SeAuencing	Set "(the .(.tem

T$0(e 4

Multi-Frame Module Used for US Multi-Frame Images Only

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
D002*,000*E	)S	1	3um"er of !rame.	A#HO
D002*,0006E	AH	1	!rame)ncrement -ointer	001* 1063 Q !rame Hime

T$0(e 4"

SC Equipment Module Used for Second Capture Images Only

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
D000*,0060E	CS	3	&oda'it(	L#SM
D000*,0064E	CS	1	Con0er.ion H($e	L 8 SDM
D001*,1010E	=O	3	Secondar(Ca$ture De0ice)D	LDC*M
D001*,1016E	=O	3	Secondar(Ca$ture De0ice &anufacturer	L&)3D1A / M
D001*,101*E	=O	3	Secondar(Ca$ture De0ice &anufacturerJ. &ode' 3ame	LDC*M
D001*,1016E	=O	3	Secondar(Ca$ture De0ice SoftBare ,er.ionD.E	A#HO

T$0(e 4!

SC Image Module Used for Second Capture Images Only

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
D001*,1012E	DA	3	Date of Secondar(Ca$ture	A#HO
D001*,1014E	H&	3	Hime of Secondar(Ca$ture	A#HO

T$0(e 4:

En'$8s)($&e* Do') ,en& Mo*)(e

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
>0020&0015?	)S	1	Instan+e N' 23er	A#HO
>0000&0025?	DA	2	" *ntent Date	A#HO
>0000&0055?	H&	2	" *ntent $i2e	A#HO
>0000&002A?	DH	2	A+<'isiti*n	A#HO

			Date$i2e	
>0020&0501?	CS	1	'rned In Ann*tati*n	L/2SM
>0042&0010?	SH	2	D*+'2ent $itle	Hhe Hit'e of the Document
>0040&A045?	S:	2	"*n+e:t Na2e "*de Se<'en+e	Set to Kero 'ength
>0040&A4I5?	CS	5	7eri4i+ati*n @lag	A#HO. L#3,21)!)2DMQ 3ot atte.ted "(a 'ega''(accounta"'e $er.on. L,21)!)2DMQ Atte.ted to D.ignedE "(a ,erif(ing O".er0er or =ega' Authenticator named in the document, Bho i. accounta"'e for it. content.
>0042&0012?	=O	1	MIME $y:e *4 En+a:s'lated D*+'2ent	
>0042&0011?	O4	1	En+a:s'lated D*+'2ent	Hhe -D! Document

T$0(e 44

A'@)isi&ion Con&e<& Mo*)(e

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
>0040&0///?	S:	2	A+<'isiti*n "*nteJt	

			=ID	
>/001&0010?			F :rivate 2a: :ed t* >/001&00@@?	NMindrayRa ; Data0
>/001&1011?			F :rivate 2a: :ed t* >/001&@@11?	

			"al+'lati*n $e+hni<'e	
>/200&I250?	SA	1	,er-4ra2e @'n+ti*nal Cr*':s Se<'en+e	
>0020&I111?	SA	1	Y@ra2e "*ntent Se<'en+e	
>0010&I1/1?	D$	1"	YY@ra2e Re4eren+e Date$i2e	Set 3y the syste2
>0010&I014?	D$	1"	YY@ra2e A+<'isiti*n Date$i2e	Set 3y the syste2
>0010&I220?	@D	1"	YY@ra2e A+<'isiti*n D'rati*n	Set 3y the syste2
>0020&I1/1?	=#	1"	YYDi2ensi*n IndeJ 7al'es	Set 3y the syste2
>0020&I50E?	SA	1	Y,lane ,*siti*n >7*I'2e? Se<'en+e	
>0020&I501?	@D	1	YYI2age ,*siti*n >7*I'2e?	Set 3y the syste2
>0020&I510?	SA	1	Y$e2:*ral ,*siti*n Se<'en+e	
>0020&I50D?	@D	1	YY$e2:*ral ,*siti*n $i2e !44set	Set 3y the syste2
>0010&I001?	SA	1	YI2age Data $y:e Se<'en+e	
>0010&I000?	"S	1	YYData $y:e	Set 3y the syste2 N$ISS=EKIN$ENSI$Y0*r N@#!9K7E#!"I$Y0
>0010&I00 ?	"S	1	YYAliased Data $y:e	NN!0
>0020&0015?	IS	1	Instan+e	A#HO

			N' 23er	
>0000&0025?	DA	1	" *ntent Date	A#HO
>0000&0055?	$M	1	" *ntent $i2e	A#HO
>0020&0000?	IS	1	N' 23er *4 @ra2es	A#HO

T$0(e 4D

M)(&i--r$, e Di , ension Mo*)(e

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
>0020&I221?	SA	1	Di2ensi*n !rgani.ati*n Se<'en+e	
>0020&I1G4?	=I	1	YDi2ensi*n !rgani.ati*n =ID	A=$!
>0020&I222?	SA	1	Di2ensi*n IndeJ Se<'en+e	In+l'ding 5 ite2s%
>0020&I1G/?	A$	1	YDi2ensi*n IndeJ ,*inter	Ite21F 0J0020I50d Ite22F 0J0020I501 Ite25F 0J0010I000
>0020&I1G1?	A$	1"	Y@'n+ti*nal Cr*': ,*inter	Ite21F 0J0020I510 Ite22F 0J0020I50e Ite25F 0J0010I001
>0020&I1G4?	=I	1"	YDi2ensi*n !rgani.ati*n =ID	Ite21& Ite22& Ite25F A=$!
>0020&I421?	#!	5	YDi2ensi*n Des+ri:ti*n #a3el	Ite21F $i2e Ite22F I2age :*siti*n>Z? Ite25F Data ty:e

T$0(e 48

En=$n'e* USI ,$%e Mo*)(e

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
>0000&0000?	"S	1	I2age $y:e	N! RICINA#6 , RIMARY0
>0020&0002?	=S	1	Sa2:les ,er	N10

			,iJel	
>0020&0004?	"S	1	,h*t*2etri+ Inter:retati*n	NM!N!"HR!ME20
>0020&0100?	=S	1	its All*+ated	NO0
>0020&0101?	=S	1	its St*red	NO0
>0020&0102?	=S	1	High it	N10
>0020&0105?	=S	1	,iJel Re:resentati*n	NO0
>0020&I511?	"S	1	Di2ensi*n !rgani.ati*n $y:e	N5D0 *r N5DK$EM,!RA#0F
>0000&002A?	D$	1	A+<'isiti*n Dateti2e	A#HO
>0010&I015?	@D	1	A+<'isiti*n D'rati*n	Set "(the .(.tem
>0020&0050?	DS	1	,iJel S:a+ing	Set "(the .(.tem
>0010&I00"?	"S	1"	,*siti*n Meas'ring Devi+e =sed	N@REEHAND0
>20/0&0020?	"S	1	,resentati*n #=$ Sha:e	NIDENIY0
>0020&10/2?	DS	1	Res+ale Inter+e:t	NO0
>0020&10/5?	DS	1	Res+ale Sl*:e	N10
>0020&0501?	"S	1	'rned In Ann*tati*n	NN!0
>0010&I001?	SA	1	$ransd'+er S+an ,attern "*de Se<'en+e	
Y>0000&0100?	SH	1	"*de 7al'e	N12/2420
Y>0000&0102?	SH	1	"*ding S+he2e Designat*r	ND"M0
Y>0000&0105?	SH	1	"*ding S+he2e 7ersi*n	N200I040I0
Y>0000&0104?	#!	1	"*de Meaning	N7*I'2e s+an :attern0
>0010&I00D?	SA	1	$ransd'+er Ce*2etry "*de Se<'en+e	
Y>0000&0100?	SH	1	"*de 7al'e	N12/2/40

Y>0000&0102?	SH	1	"*ding S+he2e Designat*r	ND"M0
Y>0000&0105?	SH	1	"*ding S+he2e 7ersi*n	N200I040I0
Y>0000&0104?	#!	1	"*de Meaning	NSe+t*r 'ltras*'nd transd'+er ge*2etry0
>0010&I00E?	SA	1	$ransd'+er ea2 Steering "*de Se<'en+e	
Y>0000&0100?	SH	1	"*de 7al'e	N12/2/00
Y>0000&0102?	SH	1	"*ding S+he2e Designat*r	ND"M0
Y>0000&0105?	SH	1	"*ding S+he2e 7ersi*n	N200I040I0
Y>0000&0104?	#!	1	"*de Meaning	NMe+hani+al 3ea2 steering0
>0010&I00@?	SA	1	$ransd'+er A::li+ati*n "*de Se<'en+e	
Y>0000&0100?	SH	1	"*de 7al'e	N12/2G10
Y>0000&0102?	SH	1	"*ding S+he2e Designat*r	ND"M0
Y>0000&0105?	SH	1	"*ding S+he2e 7ersi*n	N200I040I0
Y>0000&0104?	#!	1	"*de Meaning	NEJternal $ransd'+er0
>0010&/022?	DS	1	Me+hani+al IndeJ	Set "(the .(.tem
>0010&/024?	DS	1	*ne $her2al IndeJ	Set "(the .(.tem
>0010&/02G?	DS	1	"ranial $her2al IndeJ	Set "(the .(.tem
>0010&/021?	DS	1	S*4t $iss'e $her2al IndeJ	Set "(the .(.tem
>0010&I001?	@D	1	De:th>s? *4 @*+'s	Set "(the .(.tem
>0010&/0/0?	IS	1	De:th *4 S+an @ield	Set "(the .(.tem

"*nventi*ns 'sed 4*r the 7al'e>s? and "*2 2ents se+ti*n areF

M9#B the attri3'te val'e s*'r+e is 4r*2 M*dality 9 !R(#IS$

=SER B the attri3'te val'e s*'r+e is 4r*2 =ser%s in:'t

A=$! B a't*2ati+ally generated 3y the M! DA#I$Y syste2

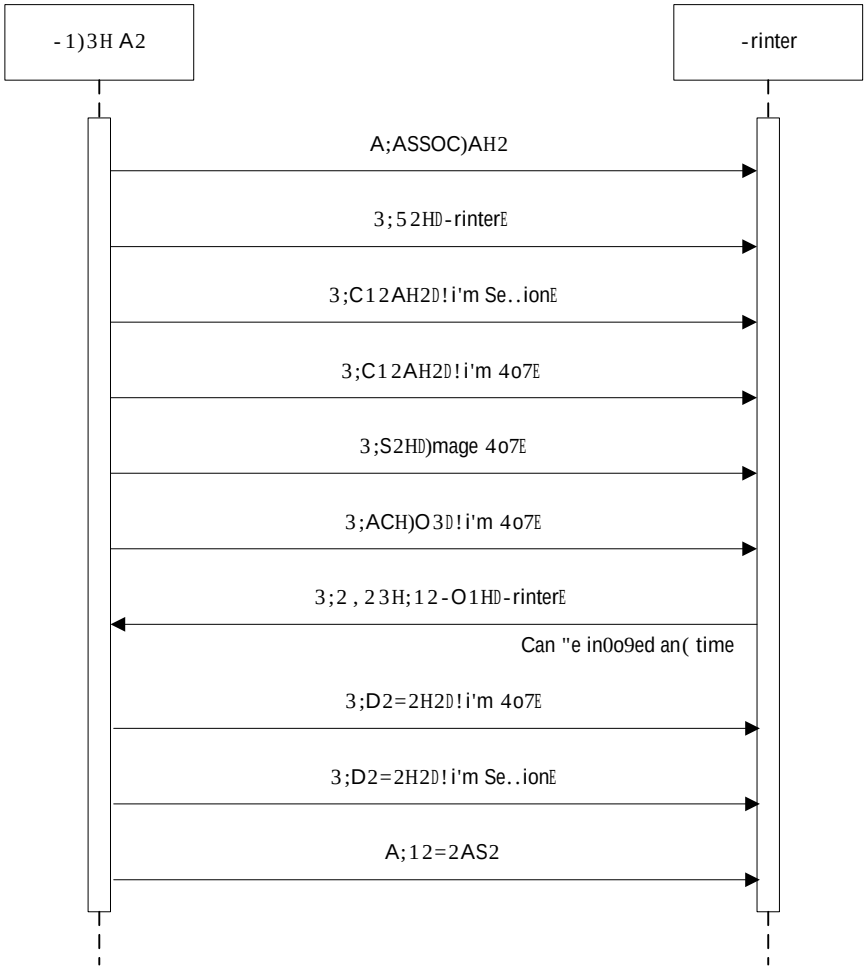
"!N@IC - the attri3'te val'e s*'r+e is a +*n4ig'ra3le :ara2eter

4.!."..:.: A'&i.i&+ E Fi(, I , $%es

4.!."..:.:."Des'ri8&ion $n* Se@)en'in% o- A'&i.i&ies

A 'ser +*2:*ses i2ages *nt* 4il2 sheets and re<'ests the2 t* 3e sent t* a s:e+i4i+ hard+*:y devi+e% $he 'ser +an sele+t the desired 4il2 4*r2at and n'23er *4 +*:ies% Ea+h :rint-)*3 is 4*r;arded t* the)*3<'e'e and :r*+essed individ'ally%

$he syste2 is inv*-ed 3y the 'ser *n %Send t*0 =I i4 the :rint re2*te AE is :re-+*n4ig'red% Stat's *4 the :rint-)*3 is re:*rted thr*'gh tas- 2anage2ent =I% I4 :re-+*n4ig'red *n ,reset =I& the 4ailed :rint tas- ;ill 3e a't*2ati+ally retried s:e+i4ied ti2es% I4 n* :re-+*n4ig'rati*n& the 'ser +an als* retry 2an'ally% !nly *ne tas- ;il: i 1423



Fi%)re 4

Sequencing of Activity – Film Images

4.!."..:.:.!Pro8ose* Presen&$&ion Con&e<&s

,rint AE is +a:a3le *4 :r*:*sing the ,resentati*n "*nteJts sh*;n in the $a3le 3el*;F

Table 49

Proposed Presentation Contexts for Activity Film Images

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
4a.ic 5ra(.ca'e -rint &anagement &eta	1.2.*40.1000*.+.1.1.6	)m$'icit ,1 =itt'e 2ndian	1.2.*40.1000*.1.2	SC#	3one
		27$'icit ,1 =itt'e 2ndian	1.2.*40.1000*.1.2.1	SC#	3one
		27$'icit ,1 4ig 2ndian	1.2.*40.1000*.1.2.2	SC#	3one

,rint AE 'ses the ,rinter S!, "lass N-CE$ *:erati*n t* *3tain in4*r2ati*n a3*'t the +'rrent :rinter stat's% $he attri3'tes eJ+e:ted via N-CE$ are listed in the $a3le 3el*;F

Table 51
Printer SOP Class N-GET Request Attribute Identifier List

Attribute Name	Tag
-rinter Statu.	D2110,0010E
-rinter Statu.)nfo	D2110,0020E
-rinter 3ame	D2110,0030E
&anufacturer	D000*,0070E
&anufacturer &ode' 3ame	D000*,1060E
De0ice Seria' 3um"er	D001*,1000E
SoftBare ,er.ionD.E	D001*,1020E
Date of =a.t Ca'i"ration	D001*,1200E
Hime of =a.t Ca'i"ration	D001*,1201E

$he 3ehavi*r *4 ,rint AE ;hen en+*'ntering stat's +*des in a N-CE$ res:*nse is s'22ari.ed in the $a3le 3el*;F

Table 52
Printer SOP Class N-GET Response Status Handling Behavior

Service Status	Further Meaning	Error Code	Behavior
Succe..	Succe..	0000	Hhe reAue.t to get $rinter .tatu. information Ba. .ucce...
8arning	an(Barning	7777	Hhe $rint;Io" continue. to "e $rinted.
!ai'ure	an(fai'ure	7777	Hhe A..ociation i. a"orted u.ing A;A4O1H and the $rint;Io" i. mar9ed a. fai'ed. Hhe .tatu. meaning i. 'ogged and re$orted to the u.er.

4.!."..:.:.4.! Prin&er SOP C($ss No&i-i'$&ions 3N-EVENT-REPORT4

T$0(e A:

Prin&er SOP C($ss N-E.en&-Re8or& 9e=$.ior

Event Type Name	Event Type ID	Behavior
3orma'	1	Hhe $rint;Io" continue. to "e $rinted.
8arning	2	Hhe $rint;Io" continue. to "e $rinted. Hhe content. of -rinter Statu.)nfo D2110, 0020E i. 'ogged and re$orted to the u.er 0ia the Io";contro' a$$'ication.
!ai'ure	3	Hhe $rint;Io" i. mar9ed a. fai'ed. Hhe content. of -rinter Statu.)nfo D2110, 0020E i. 'ogged and re$orted to the u.er 0ia the Io";contro'

		a$$'ication.
@	@	An in0a'id 20ent H($e)D Bi'' cau.e a .tatu. code of 0113C to "e returned in a 3;2,23H;12-O1H re.$on.e.

,rint AE is +a:a3le *4 re+eiving an N-E7EN$-RE,!R$ re<'est at any ti2e d'ring an ass*+iati*n% $he 3ehavi*r *4 ,rint AE ;hen re+eiving Event $y:es ;ithin the N-E7EN$-RE,!R$ is s'22ari.ed in the $a3le /5%

$he reas*ns 4*r ret'rning s:e+i4i+ stat's +*des in a N-E7EN$-RE,!R$ res:*nse are s'22ari.ed in the $a3le 3el*;F

T$0(e A4

Prin&er SOP C($ss N-EVENT-REPORT Res8onse S&$&)s Re$sons

Service Status	Further Meaning	Error Code	Reasons
Succe..	Succe..	0000	Hhe notification e0ent ha. "een .ucce..fu''(recei0ed.
!ai'ure	3o Such 20ent H($e	0113C	An in0a'id 20ent H($e)D Ba. .u$$'ied in the 3;2,23H;12-O1H reAue.t.
!ai'ure	-roce..ing !ai'ure	0110C	An interna' error occurred during $roce..ing of the 3;2,23H;12-O1H. A .hort de.cri$tion of the error Bi'' "e returned in 2rror Comment D0000, 0602E.

4.!."..:.:.ASOP S8e'i-i' Con-or,$n'e -or &=e Fi(, Session SOP C($ss

,rint AE s'::*rts the 4*ll*;ing DIMSE *:erati*ns 4*r the @il2 Sessi*n S!, "lassF

- L N-"REA$E
- L N-DE#E$E

Details *4 the s'::*rted attri3'tes and stat's handling 3ehavi*r are des+ri3ed in the 4*ll*;ing s'3se+ti*ns%

4.!."..:.:.A." Fi(, Session SOP C($ss O8er$&ions 3N-CREATE4

$he attri3'tes s'::lied in an N-"REA$E Re<'est are listed in the $a3le 3el*;F

Table 55
Film Session SOP Class N-CREATE Request Attributes

Attribute Name	Tag	VR	Value	Presence of Value	Source
3um"er of Co$ie.	D2000,0010E	)S	F1, 100G	A=8A/S	CO3!)5
-rint -riorit(	D2000,0020E	CS	=O8,&2D,C)5C	A=8A/S	CO3!)5
&edium H($e	D2000,0030E	CS	4=#2!)=&,C=2A1!)=&,-A-21	A=8A/S	CO3!)5
!i'm	D2000,0040E	CS	&A5AR)32 -1OC2SSO1	A=8A/S	CO3!)5

De.tination					

$he 3ehavi*r *4 ,rint AE ;hen en+*'ntering stat's +*des in a N-"REA$E res:*nse is s'2 2ari.ed in the $a3le 3el* ;F

Table 56
Film Session SOP Class N-CREATE Response Status Handling Behavior

Service Status	Further Meaning	Error Code	Behavior
Succe..	Succe..	0000	Hhe SC- ha. com$'eted the o$eration .ucce..fu''(.
8arning	&emor(a''ocation not .u$$orted	4607	Hhe 3;C12AH2 o$eration i. con.idered .ucce..fu'.
8arning	an(Barning	7777	Hhe 3;C12AH2 o$eration i. con.idered .ucce..fu'.
!ai'ure	an(fai'ure	C607	Hhe A..ociation i. a"orted u.ing A;A4O1H and the $rint;Io" i. mar9ed a. fai'ed. Hhe .tatu. meaning i. 'ogged and re$orted to the u.er.

4.!."..:.:.A.! Fi(, Session SOP C($ss O8er$&ions 3N-DELETE4

$he 3ehavi*r *4 ,rint AE ;hen en+*'ntering stat's +*des in a N-DE#E$E res:*nse is s'2 2ari.ed in the $a3le 3el* ;F

Table 57
Printer SOP Class N-DELETE Response Status Handling Behavior

Service Status	Further Meaning	Error Code	Behavior
Succe..	Succe..	0000	Hhe SC- ha. com$'eted the o$eration .ucce..fu''(.
8arning	An(Barning	7777	Hhe 3;D2=2H2 o$eration i. con.idered .ucce..fu'.
!ai'ure	An(fai'ure	7777	Hhe A..ociation i. a"orted u.ing A;A4O1H and the $rint;Io" i. mar9ed a. fai'ed. Hhe .tatu. meaning i. 'ogged and re$orted to the u.er.

4.!."..:.:.BSOP S8e'i-i' Con-or ,$n'e -or &=e Fi(, 9o< SOP C($ss

,rint AE s':*rts the 4*ll* ;ing DIMSE *:erati*ns 4*r the @il2 *J S!, "lassF

- L N-"REA$E
- L N-A"$I!N
- L N-DE#E$E

Details *4 the s'::*rted attri3'tes and stat's handling 3ehavi*r are des+ri3ed in the

4*ll* ; ing s'3se+ti*ns%

4.!."..:.:.B." Fi(, 9o< SOP C($ss O8er$&ions 3N-CREATE4

$he attri3'tes s' : : lied in an N-"REA$E Re<'est are listed in the $a3le 3el* ; F

Table 58
Film Box SOP Class N-CREATE Request Attributes

Attribute Name	Tag	VR	Value	Presence of Value	Source
)mage Di.$'a(!ormat	D2010,0010E	CS	-O1H1A)H› SHA3DA1D$1,1 SHA3DA1D$1,2 SHA3DA1D$1,3 SHA3DA1D$2,1 SHA3DA1D$2,2 SHA3DA1D$2,3 SHA3DA1D$2,4 SHA3DA1D$3,3 SHA3DA1D$3,4 SHA3DA1D$3,+ SHA3DA1D$3,6 SHA3DA1D$4,4 SHA3DA1D$4,+ SHA3DA1D$4,6 SHA3DA1D$4,7 SHA3DA1D$4,* SHA3DA1D$+,+ SHA3DA1D$+,6 SHA3DA1D$+,7 SHA3DA1D$+,* SHA3DA1D$6,6 SHA3DA1D$6,7 SHA3DA1D$6,* SHA3DA1D$6,6 SHA3DA1D$6,10 SHA3DA1D$7,7 SHA3DA1D$7,* SHA3DA1D$7,6	A=8A/S	CO3!)5

			SHA3DA1D$7,10		
			SHA3DA1D$*,*		
			SHA3DA1D$*,6		
			SHA3DA1D$*,10		
			=A3DSCA-2›		
			SHA3DA1D$1,1		
			SHA3DA1D$2,1		
			SHA3DA1D$3,1		
			SHA3DA1D$1,2		
			SHA3DA1D$2,2		
			SHA3DA1D$3,2		
			SHA3DA1D$4,2		
			SHA3DA1D$3,3		
			SHA3DA1D$4,3		
			SHA3DA1D$+,3		
			SHA3DA1D$6,3		
			SHA3DA1D$4,4		
			SHA3DA1D$+,4		
			SHA3DA1D$6,4		
			SHA3DA1D$7,4		
			SHA3DA1D$*,4		
			SHA3DA1D$+,+		
			SHA3DA1D$6,+		
			SHA3DA1D$7,+		
			SHA3DA1D$*,+		
			SHA3DA1D$6,6		
			SHA3DA1D$7,6		
			SHA3DA1D$*,6		
			SHA3DA1D$6,6		
			SHA3DA1D$10,6		
			SHA3DA1D$7,7		
			SHA3DA1D$*,7		
			SHA3DA1D$6,7		
			SHA3DA1D$10,7		
			SHA3DA1D$*,*		
			SHA3DA1D$6,*		

			SHA3DA1DS10,*		
1eferenced !i'm Se..ion SeAuence	D2010,0+00E	S :			
O1eferenced SO- C'a.. #)D	D000*,11+0E	#)	1.2.*40.1000*.+.1.1.1	A=8A/S	A#HO
O1eferenced SO-)n.tance #)D	D000*,11++E**	#)	# !rom created# !i'm Se..ionSSO-+)+#		

Service Status	Further Meaning	Error Code	Behavior
Succe..	Succe..	0000	Hhe SC- ha. com$'eted the o$eration .ucce..fu''(.
8 arning	1eAue.ted &in Den.it(or &a7 Den.it(out.ide of $rinterP. o$erating range	460+C	Hhe 3;C12AH2 o$eration i. con.idered .ucce..fu'.
8 arning	An(other Barning	7777	Hhe 3;C12AH2 o$eration i. con.idered .ucce..fu'.
!ai'ure	An(fai'ure	7777	Hhe A..ociation i. a"orted u.ing A;A4O1H and the $rint;Io" i. mar9ed a. fai'ed. Hhe .tatu. meaning i. 'ogged and re$orted to the u.er.

4.!."..:.:.B.! Fi(, 9o< SOP C($ss O8er$&ions 3N-ACTION4

An N-A"$I ! N Re<'est is iss'ed t* instr'+t the , rint S" , t* :rint the +*ntents *4 the @il2 *J% $he A+ti*n Re:ly arg' 2ent in an N-A"$I ! N res:*nse is n*t eval'ated%

$he 3ehavi*r *4 , rint AE ;hen en+*'ntering stat's +*des in a N-A"$I ! N res:*nse is s' 2 2ari.ed in the $a3le 3el* ;F

Table 60
Film Box SOP Class N-ACTION Response Status Handling Behavior

Service Status	Further Meaning	Error Code	Behavior
Succe..	Succe..	0000	Hhe SC- ha. com$'eted the o$eration .ucce..fu''(. Hhe fi'm ha. "een acce$ted for $rinting.
8 arning	!i'm 4o7 SO-)n.tance hierarch(doe. not contain)mage 4o7 SO-)n.tance. Dem$t($ageE	4603C	Hhe 3;ACH)O3 o$eration i. con.idered .ucce..fu'.
8 arning	)mage .iKe i. 'arger than)mage 4o7 .iKe. Hhe image ha. "een demagnified.	4604C	Hhe 3;ACH)O3 o$eration i. con.idered .ucce..fu'.
8 arning	)mage .iKe i. 'arger than)mage 4o7 .iKe. Hhe image ha. "een cro$$ed to fit.	4606C	Hhe 3;ACH)O3 o$eration i. con.idered .ucce..fu'.
8 arning	)mage .iKe or Com"ined -rint)mage SiKe i. 'arger than)mage 4o7 .iKe. Hhe image or com"ined -rint)mage ha. "een decimated to fit.	460AC	Hhe 3;ACH)O3 o$eration i. con.idered .ucce..fu'.

Details *4 the s' : :*rted attri3'tes and stat's handling 3ehavi*r are des+ri3ed in the 4*ll* ; ing s'3se+ti*ns%

4.!."..:.:.D." I , $%e 9o< SOP C($ss O8er$&ions 3N-SET4

$he attri3'tes s' : :lied in an N-SE$ Re<'est are listed in the $a3le 3el* ; F

Table 62
Image Box SOP Class N-SET Request Attributes

Attribute Name	Tag	VR	Value	Presence of Value	Source
)mage -o.ition	D2020,0010E	#S	F1, num<image1G	A= 8 A / S	A#HO
4a.ic 5ra(.ca'e)mage SeAuence	D2020,0111E	S :		)f the .er0ice i. configured a. &O3OCC1O&22	
OSam$'e. -er -i7e'	D002*,0002E	#S	1	A= 8 A / S	A#HO
O-hotometric)nter$retation	D002*,0004E	CS	&O3OCC1O&22	A= 8 A / S	CO3 !)5
O1oB.	D002*,0010E	#S	De$end. on fi'm .iKe	A= 8 A / S	A#HO
OCo'umn.	D002*,0011E	#S	De$end. on fi'm .iKe	A= 8 A / S	A#HO
O-i7e' A.$ect 1atio	D002*,0034E	)S	Set to Kero 'ength	, 3A-	A#HO
O4it. A''ocated	D002*,0100E	#S	*	A= 8 A / S	A#HO
O4it. Stored	D002*,0101E	#S	*	A= 8 A / S	A#HO
OCigh 4it	D002*,0102E	#S	7	A= 8 A / S	A#HO
O-i7e' 1e$re.entation	D002*,0103E	#S	0	A= 8 A / S	A#HO
O-i7e' Data	D7!20,0010E	O4	-i7e'. of rendered fi'm .heet	A= 8 A / S	A#HO
4a.ic Co'or)mage SeAuence	D2020,0111E	S :		)f the .er0ice i. configured a. 1 5 4	
OSam$'e. -er -i7e'	D002*,0002E	#S	3	A= 8 A / S	A#HO
O-hotometric)nter$retation	D002*,0004E	CS	1 5 4	A= 8 A / S	CO3 !)5
O-'anar Configuration	D002*,0006E	#S	1	A3A-	A#HO
O1oB.	D002*,0010E	#S	De$end. on fi'm .iKe	A= 8 A / S	A#HO
OCo'umn.	D002*,0011E	#S	De$end. on fi'm .iKe	A= 8 A / S	A#HO

O-i7e' A.$ect 1atio	D002*,0034E	)S	Set to Kero 'ength	,3A-	A#HO
O4it. A''ocated	D002*,0100E	#S	*	A=8A/S	A#HO
O4it. Stored	D002*,0101E	#S	*	A=8A/S	A#HO
OCigh 4it	D002*,0102E	#S	7	A=8A/S	A#HO
O-i7e' 1e$re.entation	D002*,0103E	#S	0	A=8A/S	A#HO
O-i7e' Data	D7!20,0010E	O4	-i7e'. of rendered fi'm .heet	A=8A/S	A#HO

N*te 1 l4 the attri3'te *4)mage Di.$'a(!ormat is >S$ANDARDT2&n?& n'2Ki2age is 2Vn% $he 3ehavi*r *4 ,rint AE ;hen en+*'ntering stat's +*des in a N-SE$ res:*nse is s'22ari.ed in the $a3le 3el*;F

Table 63

Image Box SOP Class N-SET Response Status Handling Behavior

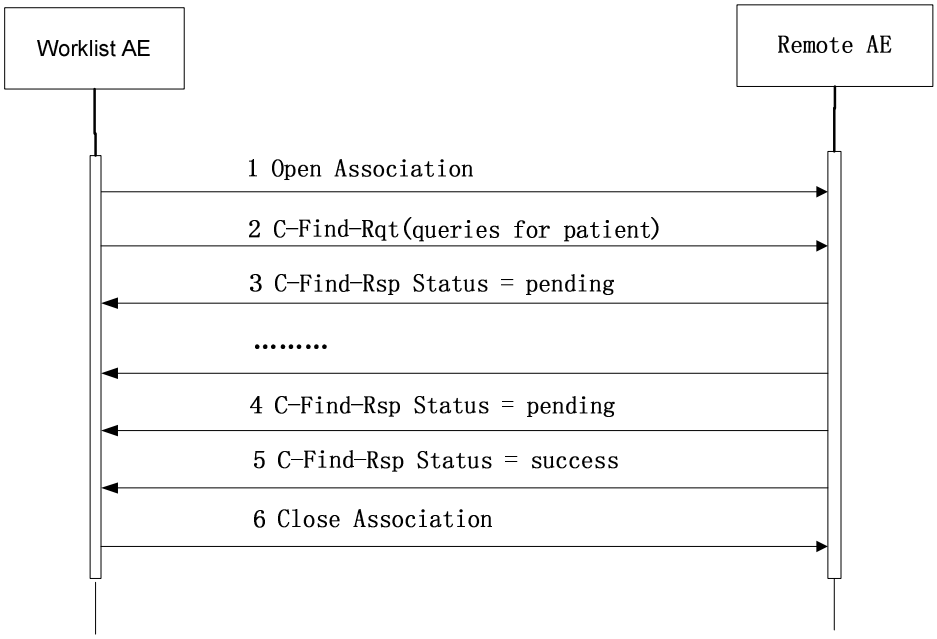
Service Status	Further Meaning	Error Code	Behavior
Succe..	Succe..	0000	I2age :rint is s'++ess4'l& $he stat's +*de is l*gged and the tas- s'++ess is re:*rted t* the 'ser via tas- 2anage2ent%

8arning)mage .iKe i. 'arger than)mage

			meaning i. 'ogged and re$orted to the u.er.
!ai'ure	)n.ufficient memor(in $rinter to .tore the image.	C60+	Hhe A..ociation i. a"orted u.ing A;A4O1H and the $rint;Io" i. mar9ed a. fai'ed. Hhe .tatu. meaning i. 'ogged and re$orted to the u.er.
!ai'ure	Com"ined -rint)mage Si‰e i. 'arger than)mage 4o7 .i‰e.	C613	Hhe A..ociation i. a"orted u.ing A;A4O1H and the $rint;Io" i. mar9ed a. fai'ed. Hhe .tatu. meaning i. 'ogged and re$orted to the u.er.
!ai'ure	An(other fai'ure	7777	Hhe A..ociation i. a"orted u.ing A;A4O1H and the $rint;Io" i. mar9ed a. fai'ed. Hhe .tatu. meaning i. 'ogged and re$orted to the u.er.

4.!."..:.4A'&i.i&+ E Sen* Fin* Re@)es&

4.!."..:.4."Des'ri8&ion $n* Se@)en'in% o- A'&i.i&ies



Fi%)re A

Sequencing of Activity – Send FIND Request

A :*ssi3le se<'en+e *4 intera+ti*ns 3et;een the 9*r-list AE and a re2*te AE >e‰g‰ a syste2 s'+h as a RIS *r HIS‰ *r a ,A"S? is ill'strated in the @ig're 3el* ;F

1. Hhe 8or9'i.t A2 o$en. an a..ociation Bith the remote A2
2. Hhe 8or9'i.t A2 .end. a C;!)3D reAue.t to the remote A2 containing the :uer(

attri"ute..

3. Hhe remote A2 return. a C;!)3D re.$on.e containing the reAue.ted attri"ute. of the fir.t matching)tem.
4. Hhe remote A2 return. another C;!)3D re.$on.e containing the reAue.ted attri"ute. of the .econd matching)tem. And then another one.
+. 8hen the remote A2 return. a'' the C;!)3D re.$on.e. Bith .tatu. Succe.. indicating that no further matching)tem. e7i.t.
6. Hhe C;!ind A2 c'o.e. the a..ociation Bith the remote A2.

4.!."..:.4.!Pro8ose* Presen&$&ion Con&e<&s

Table 64
Proposed Presentation Contexts for Worklist AE

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
&oda'it(8 or9'i.t)nformation &ode' !ind	1.2.*40.1000*.+.1.4.31	)m$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2	SC#	3one
		27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1	SC#	3one
		27$'icit , 1 4ig 2ndian			

	reAue.t		
Succe..	&atching i. com$'ete ; 3o fina')dentifier i. .u$$'ied.	0000	-atient 'i.t. .hoB on the #)
-ending	&atche. are continuing ; Current &atch i. .u$$'ied and an(O$tiona' Te(. Bere .u$$orted in the .ame manner a. 1eAuired Te(..	!!00	/
-ending	&atche. are continuing ; 8 arning that one or more O$tiona' Te(. Bere not .u$$orted for e7i.tence for thi.)dentifier.	!!01	/
@	Hhe A..ociation i. a"orted u.ing A;A4O1H and the Auer(i. mar9ed a. fai'ed. Hhe .tatu. meaning i. 'ogged and re$orted to the u.er if an interacti0e Auer(. An(additiona' error information in the 1e.$on.e Bi'' "e 'ogged.	An(other .tatu. code.	Hhe a..ociation i. a"orted u.ing A;A4O1H and a notif(me..age i. di.$'a(ed› Some error. ha$$en Bhen Auer(Bor9'i.t .er0er.

Worklist Request Identifier

ATTRIBUTE	VR	ATTRIBUTE NAME	MATCHING KEYS	RETURN KEYS
Module: Patient Identification Module (M)				
D0010,0010E	-3	-atientU. 3ame	configura"'e	?DD)E
D0010,0020E	=O	-atient)D	configura"'e	?DD)E
D0010,1000E	=O	Other -atient)D.		?DD)E
Module: Patient Demographic Module (M)				
D0010,0030E	DA	-atientU. 4irth Date		?DD)E
D0010,0032E	H&	-atientU. 4irth Hime		?DD)E
D0010,0040E	CS	-atientU. Se7		?DD)E
D0010,1020E	DS	-atientU. SiKe		?DD)E
D0010,1030E	DS	-atientU. 8eight		?DD)E
D0010,2160E	SC	2thnic 5rou$		?DD)E
D0010,4000E	=H	-atient Comment.		?DD)E
D0040,3001E	=O	Confidentia'it(con.traint on $atient data De.cri$tion		?DD)E
Module: Patient Medical Module (M)				
D0010,2000E	=O	&edica' A'ert.		?DD)E
D0010,2110E	=O	Contra.t A''ergie.		?DD)E
D0010,2140E	#S	Additiona' -atientP. Ci.tor(		?DD)E
D0010,21C0E	#S	-regnanc(Statu.		?DD)E
D0010,21D0E	DA	=a.t &en.trua' Date		?DD)E
D003*,00+0E	=O	S$ecia' 3eed.		?DD)E
D003*,0+00E	=O	-atient State		?DD)E
Module: Visit Relationship Module (M)				
D000*,1120E	S:	1eferenced -atient SeAuence		?DD)E
Module: Visit Identification Module (M)				
D003*,0010E	=O	Admi..ion)D		?DD)E
Module: Visit Status Module (M)				
D003*,0300E	=O	Current -atient		?DD)E

		=ocation		
Module: Visit Admission Module (M)				
D000*,10*0E	=O	Admitting Diagno.i. De.cri$tion		? D D) E
Module: Scheduled Procedure Step Module (M)				
D0040,0100E	S:	Schedu'ed -rocedure Ste$ SeAuence		? D D) E
OD000*,0060E	CS	&oda'it(	Configura"'e and the defau't .et to 'a.t u.ed 0a'ue	
OD0032,1070E	=O	1eAue.ted Contra.t Agent		? D D) E
OD0040,0001E	A2	Schedu'ed Station A2 Hit'e	configura"'e and the defau't .et to (our A2 tit'e	? D D) E
OD0040,0002E	DA	Schedu'ed -rocedure Ste$ Start Date	configura"'e and the defau't .et to toda(P. date	?D D) E
OD0040,0003E	H&	Schedu'ed -rocedure Ste$ Start Hime		? D D) E
OD0040,0004E	DA	Schedu'ed -rocedure Ste$ 2nd Date		? D D) E
OD0040,000+E	H&	Schedu'ed -rocedure Ste$ 2nd Hime		? D D) E
OD0040,0006E	-3	Schedu'ed -erforming -h(.icianJ. 3ame		? D D) E
OD0040,0007E	=O	Schedu'ed -rocedure Ste$ De.cri$tion		?D D) E
OD0040,000*E	S:	Schedu'ed -rotoco' Code SeAuence		? D D) E
O OD000*,0100E	SC	Code ,a'ue		? D D) E
O OD000*,0102E	SC	Coding Scheme De.ignator		? D D) E
O OD000*,0103E	SC	Coding Scheme ,er.ion		? D D) E
O OD000*,0104E	=O	Code &eaning		? D D) E
OD0040,0006E	SC	Schedu'ed -rocedure		? D D) E

		Ste$)D		
OD0040,0010E	SC	Schedu'ed Station 3ame		? D D) E
OD0040,0011E	SC	Schedu'ed -rocedure Ste$ =ocation		? D D) E
OD0040,0012E	=O	-re;&edication		? D D) E
O D0040,0020E	CS	Schedu'ed -rocedure Ste$ Statu.		? D D) E
O D0040,0400E	=H	Comment. on the Schedu'ed -rocedure Ste$		? D D) E
Module: Requested Procedure Module (M)				
D000*,1110E	S:	1eferenced Stud(SeAuence		? D D) E
O D000*,11+0E	#)	1eferenced SO-C'a.. #)D		? D D) E
O D000*,11++E	#)	1eferenced SO-)n.tance #)D		? D D) E
D0020,000DE	#)	Stud( )n.tance #)D		? D D) E
D0032,1060E	=O	1eAue.ted -rocedure De.cri$tion		? D D) E
D0032,1064E	S:	1eAue.ted -rocedure Code SeAuence		? D D) E
O D000*,0100E	SC	Code ,a'ue		? D D) E
O D000*,0102E	SC	Coding Scheme De.ignator		? D D) E
OD000*,0103E	SC	Coding Scheme ,er.ion		? D D) E
OD000*,0104E	=O	Code &eaning		? D D) E
D0040,1001E	SC	1eAue.ted -rocedure)D	configura"'e	? D D) E
D0040,1003E	SC	1eAue.ted -rocedure		

Module: Imaging Service Request Module (M)				
D000*,00+0E	SC	Acce..ion 3um"er	configura"'e	? D D) E
D000*,0060E	-3	1eferring -h(.icianJ. 3ame		? D D) E
D0032,1032E	-3	1eAue.ting -h(.ician		? D D) E
D0032,1033E	=O	1eAue.ting Ser0ice		? D D) E
D0040,2400E	=H	)maging Ser0ice 1eAue.t Comment.		? D D) E
Module: SOP Common Module (M)				
D000*,000+E	CS	S$ecific Character Set		? D D) E
Module: Additional Attributes Module (M)				
D000*,0032E	H&	AcAui.ition Hime		? D D) E

given eJa2%

@*r ea+h eJa2 ste: trans4er& an atte2:t ; ill 3e 2ade t* trans2it it t* the sele+ted re2*te AE% I4 it 4ails& 'ser +an restart the 4ailed tas- 3y :ressing NRetry0 'tt*n *n the DI" ! M tas- dial*g%

4.!."..:.A.!Pro8ose* Presen&$&ion Con&e<&s

Table 68
Proposed Presentation Contexts for MPPS AE

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
&oda'it(-erformed -rocedure Ste$ SO-C'a..	1.2.*40.1000*.3.1.2.3.3	)m$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2	SC#	3one
		27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1	SC#	3one
		27$'icit , 1 4ig 2ndian	1.2.*40.1000*.1.2.2	SC#	3one

M, , S-S"= ; ill :r*:*se ,resentati*n "*nteJts 4*r the S!, "lasses listed a3*ve% @*r these S!, "lass& M, , S-S"= ; ill :r*:*se 2'lti:le ,resentati*n "*nteJts& *ne 4*r ea+h *4 the s'::*rted $rans4er SyntaJes%

I4 M, , S AE is *44ered a +h*i+e *4 $rans4er SyntaJes in the a++e:ted ,resentati*n "*nteJts& it ; ill a::ly the 4irst en+*'ntered t* 'se 4*r the M, , S AE *:erati*n%

4.!."..:.A.:SOP S8e'i-i' Con-or ,$n'e

M, , S AE :r*vides Standard "*n4*r2an+e t* the M, , S Servi+e "lass%

M, , S-S"= ; ill 3ehave as des+ri3ed in the $a3le 3el* ; in res:*nse t* the stat's ret'rned in the N-"reate *r N-Set res:*nse +*2 2and 2essage%

Table 69
MPPS Response Status Handling Behavior

Service Status	Further Meaning	Error Code	Behavior(As scu)
Succe..	Hhe $erformed $rocedure .te$. are .ucce..fu''(tran.ferred	0000	Hhe 3;S2H o$eration i. con.idered .ucce..fu' and the &--S uid i. .a0ed in .(.tem.
8arnin g	Hhe a..ociation i. a"orted u.ing A;A4O1H and the tran.fer i. mar9ed a. fai'ed. Hhe rea.on i. 'ogged and re$orted to the u.er.	4607	

!ai'ed	Hhe a..ociation i. a"orted u.ing A;A4O1H and the tran.fer Io" i. mar9ed a. fai'ed. Hhe rea.on i. 'ogged and re$orted to the u.er.	C607	Hhe a..ociation i. a"orted u.ing A;A4O1H and the &--S uid i.nJt .a0ed.

$a3le 3el* ; :r*vides a des+ri:ti*n *4 the M , , S N-"REA$E and N-SE$ re<'est identi4iers sent 3y 'ltras*'nd syste2% E2:ty +ells in the N-"REA$E and N-SE$ +*l'2ns indi+ate that the attri3'te is n*t sent% An NJ0 indi+ates that an a::r*:riate val'e ;ill 3e sent% A NZer* length0 attri3'te ;ill 3e sent ;ith .er* length%

T$0(e D

MPPS N-CREATE / N-SET Re@)es& I*en&i-ier

Attribute Name	Tag	Req. Type N-CREATE	Req. Type N-SET
Module: Performed Procedure Step Relationship Module (M)			
1eferenced -atient SeAuence	D000*,1120E	2 DDefau't i. .et to nu''E	3ot a''oBed
-atientP. 3ame	D0010,0010E	2	3ot a''oBed

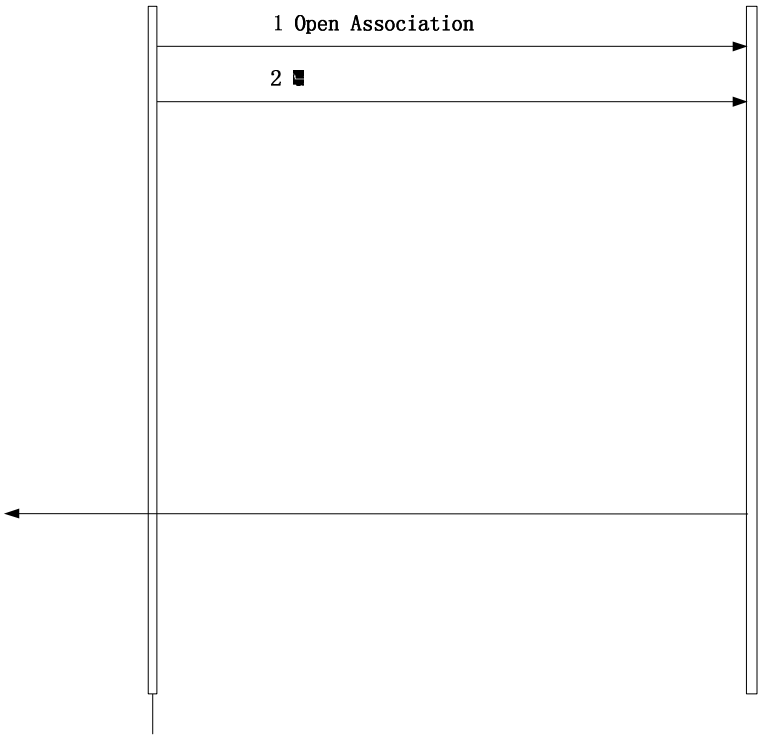
-atient)D0.1 4 5 0 4 3 ( ) 8 .67 6 1 5 5 r e , f , 4 . 1 3 3 4 3 (*) 6 . 67 6 1 5 5 4 2 4 8 4 0 3 3 . 67 6 6 r e , ( )] TJ, 1 3 3 8 (d) 1

-erformed Serie. SeAuence	D0040,0340E	2	3
O1etrie0e A2 Hit'e	D000*,00+4E	2 DDefau't i. .et to nu''E	2
OSerie. De.cri$tion	D000*,1032E	2 DDefau't i. .et to nu''E	2
O-erforming -h(.icianP. 3ame	D000*,10+0E	2	2
OO$erator.P 3ame	D000*,1070E	2	2
O1eferenced)mage SeAuence	D000*,1140E	2	2
O-rotoco' 3ame	D001*,1030E	1	1
OSerie.)n.tance #)D	D0020,0002E	1	1
O1eferenced 3on;)mage Com$o.ite SO-)n.tance SeAuence	D0040,0220E	2 DDefau't i. .et to nu''E	2
Module: Billing And Material Management Code Module (M)			
4i''ing -rocedure Ste$ SeAuence	D0040,0320E	3	3
!i'm Con.um$tion SeAuence	D0040,0321E	3	3
4i''ing Su$$'ie. and De0ice. SeAuence	D0040,0324E	3	3
Module: Performed Procedure Step Information Module (M)			
-rocedure Code SeAuence	D000*,1032E	2 DDefau't i. .et to nu''E	3
-erformed Station A2 Hit'e	D0040,0241E	1	3ot a''oBed
-erformed Station 3ame	D0040,0242E	2 DDefau't i. .et to nu''E	3ot a''oBed
-erformed =ocation	D0040,0243E	2 DDefau't i. .et to nu''E	3ot a''oBed
-erformed -rocedure Ste$ Start Date	D0040,0244E	1	3ot a''oBed
-erformed -rocedure Ste$ Start Hime	D0040,024+E	1	3ot a''oBed
-erformed -rocedure Ste$ 2nd Date	D0040,02+0E		

-erformed -rocedure Ste$ Di.continuation 1ea.on Code SeAuence	D0040,02*1E	3	3
Module: SOP Common Module (M)			
S$ecific Character Set	D000*,000+E	1C D1eAuired if an e7tended or re$'acement character .et i. u.edE	3ot a''oBed

4.!."..:.BA'&i.i&+ E 5)er+/Re&rie.e -ro , Re , o&e AE

4.!."..:.B."Des'ri8&ion $n* Se@)en'in% o- A'&i.i&ies -or SCU



	#na"'e to $roce..	C? ? ?	D0000,0601E D0000,0602E	notif(me..age i. di.$'a(ed› Hhe remote .er0er error.
Cance'ing	&atching terminated due to Cance' reAue.t	!200	3one	
Succe..	&atching i. com$'ete ; 3o fina')dentifier i. .u$$'ied	0000	3one	-atient 'i.t. .hoB on the #)
-ending	&atche. are continuing ; Current &atch i. .u$$'ied and an(O$tiona' Te(. Bere .u$$orted in the .ame manner a. 1eAuired Te(.	!!00	)dentifier	/
	&atche. are continuing ; 8 arning that one or more O$tiona' Te(. Bere not .u$$orted for e7i.tence and/or matching for thi. identifier	!!01	)dentifier	/

$he 'ltras*'nd syste2 s'::*rts the 4*ll*;ing <'ery levelsF

Z St'dy

$he :uer(/1etrie0e AE inter:rets 4*ll*;ing stat's +*des

T$0(e D:

C-Mo.e Res8onse S&$&)s ;$n*(in% 9e=$.ior

Service Status	Meaning	Protocol Codes	Related Fields	Behavior (as SCU)
1efu.ed	1efu.ed Out of 1e.ource.	A700	D0000,0602E	Hhe a..ociation i. a"orted u.ing A;A4O1H and a notif(me..age i. di.$'a(ed› Hhe remote .er0er error.
!ai'ed	)dentifier doe. not match SO- C'a..	A600	D0000,0601E D0000,0602E	
	#na"'e to $roce..	C? ? ?	D0000,0601E D0000,0602E	
Cance'ing	&atching terminated due to Cance' reAue.t	!200	3one	
Succe..	&atching i. com$'ete ; 3o fina')dentifier i. .u$$'ied	0000	3one	)mage retrie0e i. .ucce..fu', -atient 'i.t. .hoB on the #)
-ending	&atche. are continuing ; Current &atch i. .u$$'ied and an(O$tiona' Te(. Bere .u$$orted in the .ame manner a. 1eAuired Te(.	!!00	)dentifier	/
	&atche. are continuing ; 8 arning	!!01	)dentifier	/

	that one or more O$tiona' Te(. Bere not .u$$orted for e7i.tence and/or matching for thi. identifier			

4.!."..:.B.:.! S&)*+ Roo& 5)er+/Re&rie.e A&&ri0)&es

4.!."..:.B.:.: S)88or&e* M$&'=in%

@*ll* ; ing are the ty:es *4 2at+hing that +an 3e re<'est 3y the i2 :le2entati*nF

- Single 7al'e 2at+hing
- =niversal Mat+hing
- 9ild "ard Mat+hing
- Range *4 date& Range *4 $i2e

$he 'ser +an 4ilter the d* ; nl*aded "-@IND res'lt& t* vie ; a li2ited set *4 the res'lt%

4.!."..:.B.:.4 S&)*+ Le.e(

$his se+ti*n de4ines the -eys at the St'dy #evel *4 the St'dy R**t A'ery6Retrieve In4*r2ati*n M*del that are s'::*rted 3y this i2 :le2entati*n%

T$0(e D4

STUDY LEVEL ATTRI9UTES

M4 RU9McD

D0010,1000E	=O	O	Other -atient)D.		3
D0010,1001E	-3	O	Other -atient 3ame.		3
D0010,1010E	AS	O	-atientJ. Age		3
D0010,1020E	DS	O	-atientJ. Si‰e		3
D0010,1030E	DS	O	-atientJ. 8eight		3
D0010,2160E	SC	O	2thnic 5rou$		3
D0010,21*0E	SC	O	Occu$ation		3
D0010,2140E	=H	O	Additiona' -atient Ci.tor(		3
D0010,4000E	=H	O	-atient Comment.		3
D0020,1070E	)S	O	Other Stud(3um"er.		3
D0020,1200E	)S	O	3um"er of -atient 1e'ated Studie.		3
D0020,1202E	)S	O	3um"er of -atient 1e'ated Serie.		3
D0020,1204E	)S	O	3um"er of -atient 1e'ated)n.tance.		3
D0020,1206E	)S	O	3um"er of Stud(1e'ated Serie.		3
D0020,120*E	)S	O	3um"er of Stud(1e'ated)n.tance.		3
D400*,010CE	-3	O	)nter$retation Author		3
Module: Additional Attributes Module (O)					
D000*,0062E	#3	O	SO- C'a..e. in Stud(		3

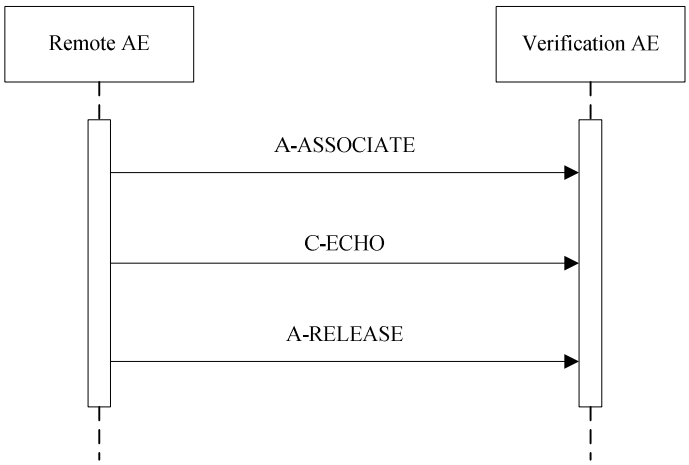
4.!."..:.B.:.A Series Le.e(A&&ri0)&es

T$0(e DA

SERIES LEVEL ATTRI9UTES

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE	MATCHINGKEYS
Module: Study Root Information Model (M)					
D0020,000DE	#)	#	Stud( )n.tance #)D		S
D0020,0002E	#)	#	Serie.)n.tance #)D		3
D000*,0060E	CS	1	&oda'it(		3
D0020,0011E	)S	1	Serie. 3um"er		3
D0020,1206E	)S	O	3um"er of Serie. 1e'ated)n.tance.		3
Module: Additional Attributes Module (O)					
D000*,0021E	DA	O	Serie. Date		3
D000*,0031E	H&	O	Serie. Hime		3

4.!."..:.B.:.B Co,8osi&e O0›e'& Ins&$n'e Le.e(



Fi%)re 8

Sequencing of Activity – Receive Echo Request

4.!."."."!A''e8&e* Presen&$&ion Con&e<&s

It ; ill a++e:t , resentati*n " *nteJts as sh* ; n in the 4*ll* ; ing ta3leF

Table 77

Proposed Presentation Contexts for Activity Verification

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
, erification	1.2.*40.1000*.1.1	)m$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2	SC-	3one
		27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1	SC-	3one
		27$'icit , 1 4ig 2ndian	1.2.*40.1000*.1.2.2	SC-	3one

4.!."."."::SOP S8e'i-i' Con-or ,$n'e

$he A::li+ati*n +*n4*r2s t* the de4initi*n *4 a 7eri4i+ati*n S" , in a++*rdan+e ; ith the DI" ! M Standard%

4.!."."4.!A'&i.i&+ E Re'ei.e S&or$%e

4.!."."4.!."Des'ri8&ion $n* Se@)en'in% o- A'&i.i&ies

$he syste2 +*'ld a+t as S*rage S" , in A'ery6Retrieve& *ther ; ise +*'ldn%t% A :*ssi3le se<'en+e *4 intera+ti*ns 3et ; een the St*rage AE >as S" , ? and a re2*te AE is ill'strated in the@ig're 1%

4.!."."4.!.!A''e8&e* Presen&$&ion Con&e<&s

$he St*rage AE >as S" , ? ; ill a++e:t , resentati*n " *nteJts as sh* ; n in the $a3le 3el* ;%

Table 78

Proposed Presentation Contexts for Storage

PROPOSED PRESENTATION CONTEXTS					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name**	**UID**		
#S)mage Storage	1.2.*40.1000*.+.1.4.1.1.6.1	)m$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2	SC-	3one
		27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1	SC-	3one
		J-25 =o..(, 4a.e'ine SeAuentia' Bith Cuffman Coding D-roce.. 1E	1.2.*40.1000*.1.2.4.+0	SC-	3one
		27$'icit , 1 4ig 2ndian	1.2.*40.1000*.1.2.2	SC-	3one
		J-25 =o..'e.., 3on;Cierarchica', !ir.t;Order -rediction D-roce.. 14 FSe'ection , a'ue 1GE	1.2.*40.1000*.1.2.4.70	SC-	3one
		1=2 =o..'e..	1.2.*40.1000*.1.2.+	SC-	3one
		J-25 2000)mage Com$re..ion D=o..'e.. On'(E	1.2.*40.1000*.1.2.4.60	SC-	3one
		J-25 2000)mage Com$re..ion	1.2.*40.1000*.1.2.4.61	SC-	3one
#S &u'tiframe)mage Storage	1.2.*40.1000*.+.1.4.1.1.3.1	)m$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2	SC-	3one
		27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1	SC-	3one
		J-25 =o..(, 4a.e'ine SeAuentia' Bith Cuffman Coding D-roce.. 1E	1.2.*40.1000*.1.2.4.+0	SC-	3one
		27$'icit , 1 4ig 2ndian	1.2.*40.1000*.1.2.2	SC-	3one
		J-25 =o..'e.., 3on;Cierarchica', !ir.t;Order -rediction D-roce.. 14 FSe'ection , a'ue 1GE	1.2.*40.1000*.1.2.4.70	SC-	3one
		1=2 =o..'e..	1.2.*40.1000*.1.2.+	SC-	3one
		J-25 2000)mage Com$re..ion D=o..'e.. On'(E	1.2.*40.1000*.1.2.4.60	SC-	3one
		J-25 2000)mage Com$re..ion	1.2.*40.1000*.1.2.4.61	SC-	3one
Secondar(	1.2.*40.100	)m$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2	SC-	3one

Ca$ture)mage Storage	0*.+.1.4.1.1 .7	27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1	SC-	3one
		J-25 =o..(, 4a.e'ine SeAuentia' Bith Cuffman Coding D-roce.. 1E	1.2.*40.1000*.1.2.4. +0	SC-	3one
		27$'icit , 1 4ig 2ndian	1.2.*40.1000*.1.2.2	SC-	3one
		J-25 =o..'e.., 3on;Cierarchica', !ir.t;Order -rediction D-roce.. 14 FSe'ection , a'ue 1GE	1.2.*40.1000*.1.2.4. 70	SC-	3one
		1=2 =o..'e..	1.2.*40.1000*.1.2.+	SC-	3one
		J-25 2000)mage Com$re..ion D=o..'e.. On'(E	1.2.*40.1000*.1.2.4. 60	SC-	3one
		J-25 2000)mage Com$re..ion	1.2.*40.1000*.1.2.4. 61	SC-	3one
Com$rehen.i 0e Structured 1e$ort Storage	1.2.*40.100 0*.+.1.4.1.1 .**.33	)m$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2	SC-	3one
		27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1	SC-	3one
		J-25 =o..(, 4a.e'ine SeAuentia' Bith Cuffman Coding D-roce.. 1E	1.2.*40.1000*.1.2.4. +0	SC-	3one
		27$'icit , 1 4ig 2ndian	1.2.*40.1000*.1.2.2	SC-	3one
		J-25 =o..'e.., 3on;Cierarchica', !ir.t;Order -rediction D-roce.. 14 FSe'ection , a'ue 1GE	1.2.*40.1000*.1.2.4. 70	SC-	3one
		1=2 =o..'e..	1.2.*40.1000*.1.2.+	SC-	3one
		J-25 2000)mage Com$re..ion D=o..'e.. On'(E	1.2.*40.1000*.1.2.4. 60	SC-	3one
		J-25 2000)mage Com$re..ion	1.2.*40.1000*.1.2.4. 61	SC-	3one
2nca$.u'ated -D! Storage	1.2.*40.100 0*.+.1.4.1.1 .104.1	)m$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2	SC-	3one
		27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1	SC-	3one
		J-25 =o..(, 4a.e'ine SeAuentia' Bith Cuffman Coding D-roce.. 1E	1.2.*40.1000*.1.2.4. +0	SC-	3one
		27$'icit , 1 4ig 2ndian	1.2.*40.1000*.1.2.2	SC-	3one
		J-25 =o..'e.., 3on;Cierarchica', !ir.t;Order -rediction D-roce.. 14 FSe'ection	1.2.*40.1000*.1.2.4. 70	SC-	3one

		, a'ue 1GE			
		1=2 =o..'e..	1.2.*40.1000*.1.2.+	SC-	3one
		J-25 2000)mage Com$re..ion D=o..'e.. On'(E	1.2.*40.1000*.1.2.4.60	SC-	3one
		J-25 2000)mage Com$re..ion	1.2.*40.1000*.1.2.4.61	SC-	3one

N*te $he syte2 +*'ld n*t s' : :*rt t* 3r* ; er the En+a:s'lated , D@%

4.!."."4.!.:SOP S8e'i-i' Con-or , $n'e

$he A: :li+ati*n +*n4*r2s t* the de4initi*n *4 a St*rage S" , in a++*rdan+e ; ith the DI" ! M Standard%

4.!."."4.:A'&i.i&+ E Re'ei.e S&or$%e Co , , i& , en&

4.!."."4.:."Des'ri8&ion $n* Se@)en'in% o- A'&i.i&ies

A :*ssi3le se<'en+e *4 intera+ti*ns 3et ; een the St*rage " * 2 2it2ent AE and a re2*te AE is ill'strated in the @ig're 5

Se<'en+ing *4 A+tivity B Send St*rage Re<'est%

4.!."."4.:.!A''e8&e* Presen&$&ion Con&e<&s

$he St*rage " * 2 2it2ent AE ; ill a++e:t , resentati*n " *nteJts as sh* ; n in the $a3le 3el* ; %

T$0(e D#

A''e8&$0(e Presen&$&ion Con&e<&s -or

A'&i.i&+ Re'ei.e S&or$%e Co , , i& , en& Res8onse

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Storage Commitment -u.h &ode'	1.2.*40.1000*.1.20.1	)m$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2	SC#	3one
		27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1	SC#	3one
		27$'icit , 1 4ig 2ndian	1.2.*40.1000*.1.2.2	SC#	3one

$he St*rage " * 2 2it2ent AE ; ill *nly a++e:t the S" = r*le ; ithin a , resentati*n " *nteJt 4*r the St*rage " * 2 2it2ent , 'sh M*del S ! , "lass%

4.!."."4.:.:SOP S8e'i-i' Con-or , $n'e

4.!."."4.:.:." S&or$%e Co , , i& , en& O8er$&ions 3N-ACTION4

$he St*rage " * 2 2it2ent AE ; ill re<'est st*rage +* 2 2it2ent 4*r the +*n4ig'red devi+e%

$he 3ehavi*r *4 St*rage " * 2 2it2ent AE ; hen re+eiving N-A+ti*n res:*nse stat's +*des

is s' 2 2 ari.ed in the $a3le 3el* ; F

T$0(e 8

S&or$%e Co , , i& , en& N-ACTION Res8onse S&$&)s ; $n*(in% 9e=$.ior

Service Status	Further

s' 2 2 ari.ed in the $a3le 3el* ;%

T$0(e 8:

S&or$%e Co , ,i& , en& N-EVENT-REPORT Res8onse S&$&)s Re$sons

Service Status	Further Meaning	Error Code
Succe..	3;2 , 23H;12-O1H me..age o$erate .ucce…	0000
!ai'ed	3;2 , 23H;12-O1H me..age o$erate fai'ed.	0110

4.!."..4.:.:.4 S&or$%e Co , ,i& , en& T$%s 3N-EVENT- REPORT4

$ags s' : :*rted 4*r re+eiving an N-Event-Re:*rt 2essage%

T$0(e 84

S&or$%e Co , ,i& , en& N-E.en&-Re8or& Mess$%e Con&en&s

EVENT TYPE NAME	EVENT TYPE ID	ATTRIBUTE	TAG	REQUIREMENT TYPE SCP
Storage Commitment 1eAue.t Succe..fu'	1	Hran.action #)D	D000*,116+E	1
		1eferenced SO- SeAuence	D000*,1166E	1
		O1eferenced SO- C'a.. #)D	D000*,11+0E	1
		O1eferenced SO-)n.tance #)D	D000*,11++E	1
Storage Commitment 1eAue.t Com$'ete N !ai'ure. 27i.t	2	Hran.action #)D	D000*,116+E	1
		1eferenced SO- SeAuence	D000*,1166E	1
		O1eferenced SO- C'a.. #)D	D000*,11+0E	1
		O1eferenced SO-)n.tance #)D	D000*,11++E	1
		!ai'ed SO- SeAuence	D000*,116*E	1
		O1eferenced SO- C'a.. #)D	D000*,11+0E	1
		O1eferenced SO-)n.tance #)D	D000*,11++E	1
		O!ai'ure 1ea.on	D000*,1167E	1

4.: Ne& /or6 In&er-$'e

4.:." S)88or&e* Co , ,)ni'$&ions S&$'6s

M*dality DI" !M AEs :r*vide DI" !M 5%0 $",6l, Net;*r- "*2 2 'ni+ati*n S' : :*rt as de4ined in , art 0 *4 the DI" !M Standard%

4.:.! TCP/IP S&$'6

M*dality DI" !M AEs inherit their $",6l, sta+- 4r*2 the 9ind*;s 8, !:erating Syste2 ':*n ;hi+h they eJe+'te%

4.:.: P=+si'$(Ne& / or6 In&er-$'e

M*dality s' : :*rts a single net ; *r- inter4a+e% ! ne *4 the 4*ll* ; ing : hysi+al net ; *r- inter4a+es ; ill 3e availa3le de : ending *n installed hard ; are * : ti*nsF

Table 85
Supported Physical Network Interfaces

2HC2 1 3 2H 10004AS2H
2thernet 100"a.eH
2thernet 10"a.eH

4.:.4 A**i&ion$(Pro&o'o(s

M*dality d*es n*t s' : :*rt additi*nal : r*t*+*ls%

4.4 Con-i%)r$&ion

$he "*n4ig'rati*n =tility all* ; s the servi+e engineer t* set and 2aintain +*n4ig'rati*n : ara2eters *4 l*+al and re2*te DI" ! M a : : li+ati*n entities%

4.4." AE Ti&(e/Presen&$&ion A**ress M$88in%

$his 2a : : ing >in+l'ding I , and : *rt n'23ers? is de4ined d'ring the syste2 Net ; *r- "*n4ig'rati*n : r*+ed're%

4.4.! Con-i%)r$0(e P$r$, e&ers

Lo'$(=os& DICOM Ser.i'e Pro8er&+3In'()*in% SCU $n* SCP4G

AE $itle

, *rt

, D=

Ser.er Se&&in%G

Devi+e

I , address

S&or$%eG

Devi+e& Servi+e na2e& AE $itle and ,*rt%

$i2e*'t%

MaJi2' 2 retries% >de4a'lt val'e is 5?

Interval $i2e >In this versi*n& this :ara2eter is n*t 'sa3le%?

"*2:ressi*n M*de& "*2:ressi*n Rati*%

"*l*r M*de >"*l*r& MiJed& *r Cray?%

"ine Z**2 M*de >*riginal *r G40V400?

All*; M'lti4ra2e>Ena3le *r n*t?

MaJ @ra2erate>*:ti*ns>2/& 50& 5/&4'll?& *r *ther in:'ted valid val'e?

5D64D>N*r2al& Ra;data *r 7*l'2e?

SR St*rage !:ti*n>NAtta+h SR 9hen St*rage I2ages0& N!nly St*re SR0& NAtta+h SR 9hen St*re I2ages and SR "*ntains =ser-de4ined Meas're2ents0& N!nly St*re SR and It "*ntains =ser-de4ined Meas're2ents0 and NN*t St*re SRR?

En+a:s'lated ,D@>Ena3le *r n*t?

De4a'lt Servi+e Stat's >Y6N?

Prin&G

Devi+e& Servi+e na2e& AE $itle and ,*rt%

$i2e*'t%

MaJi2' 2 retries% >de4a'lt val'e is 5?

Interval $i2e >In this versi*n& this :ara2eter is n*t 'sa3le%?

Media $y:eF ,A,ER& "#EAR @I#M& *r #=E @I#M

@il2 Si.eF

0IN810IN

0K/IN811IN

10IN812IN

10IN814IN

11IN814IN

11IN811IN

14IN814IN

14IN811IN

24"M824"M

24"M850"M

A4

A5

"*:iesF1-100

MaJ DensityF 0-G//5/

Min DensityF0-G//5/

SettingsF RC *r M ! N ! "HR ! ME2

Dis:lay @*r2atF

,!RRAIF

S$ANDARDT1&1

S$ANDARDT1&2

S$ANDARDT1&5

S$ANDARDT2&1

S$ANDARDT2&2

S$ANDARDT2&5

S$ANDARDT2&4

S$ANDARDT5&5

S$ANDARDT5&4

S$ANDARDT5&/

S$ANDARDT5&G

S$ANDARDT4&4

S$ANDARDT4&/

S$ANDARDT4&G

S$ANDARDT4&1

S$ANDARDT4&0

S$ANDARDT/&/

S$ANDARDT/&G

S$ANDARDT/&1

S$ANDARDT/&0

S$ANDARDTG&G

S$ANDARDTG&1

S$ANDARDTG&0

S$ANDARDTG&I

S$ANDARDTG&10

S$ANDARDT1&1

S$ANDARDT1&0

S$ANDARDT1&I

S$ANDARDT1&10

S$ANDARDT0&0

S$ANDARDT0&I

S$ANDARDT0&10

#ANDS"A,EF

S$ANDARDT1&1

S$ANDARDT1&1
S$ANDARDT2&1
S$ANDARDT5&1
S$ANDARDT1&2
S$ANDARDT2&2
S$ANDARDT5&2
S$ANDARDT4&2
S$ANDARDT5&5
S$ANDARDT4&5
S$ANDARDT/&5
S$ANDARDTG&5
S$ANDARDT4&4
S$ANDARDT/&4
S$ANDARDTG&4
S$ANDARDT1&4
S$ANDARDT0&4
S$ANDARDT/&/
S$ANDARDTG&/
S$ANDARDT1&/
S$ANDARDT0& /
S$ANDARDTG&G
S$ANDARDT1&G
S$ANDARDT0&G
S$ANDARDTI&G
S$ANDARDT10&G
S$ANDARDT1&1
S$ANDARDT0&1
S$ANDARDTI&1
S$ANDARDT10&1
S$ANDARDT0&0
S$ANDARDTI&0
S$ANDARDT10&0

Destinati*nF MACAZINE *r ,R ! "ESS ! R

@il2 ! rientati*nF #ANDS"A ,E *r , ! RRAI

, ri*rityF HICH& MED& *r # ! 9

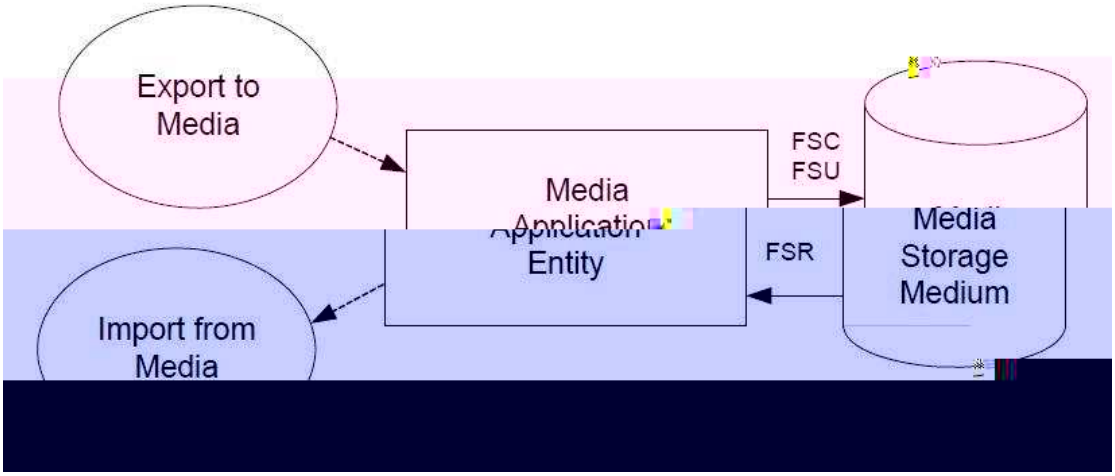
"*n4ig'rati*n In4*

Magni4i+ati*n $y:eF N ! NE& " = I"& RE ,#I"A$E& *r I#INEAR

A Me*i$ S&or$%e

A." I , 8(e , en&$&ion Mo*e(

A."." A88(i'$&ion D$&$ F(o /



Fi%)re #

A88(i'$&ion D$&$ F(o / Di$%r$, -or Me*i$ S&or$%e

% $he Media A::li+ati*n Entity eJ:*rts I2ages and Str'+t'red Re:*rts t* a re2*va3le st*rage 2edi'2% It is ass*+iated ;ith the I*+al real-;*rld a+tivity N a+-':0 'sing the +*n4ig'red eJ:*rt sele+ti*n :ara2eters 4*r sele+ted :atients data >i2ages and 6 *r Str'+t'red Re:*rts?%

A.".! F)n'&ion$(De-ini&ion o- AE℄s

A.".!." F)n'&ion$(De-ini&ion o- Me*i$ A88(i'$&ion En&i&+

=sing0EJ:*rt0 ;ill :ass the +'rrently sele+ted :atients eJa2s *r individ'ally sele+ted i2ages t* the Media A::li+ati*n Entity% $he +*ntents *4 ea+h eJ:*rt)*3 ;ill 3e ;ritten t* the sele+ted 2edia destinati*n% $he si.e *4 the sele+ted 2edia is 'sed t* deter2ine and dis:lay the n'23er *4 2edia re<'ired 4*r the eJ:*rt% 9hen a devi+e is 4illed t* +a:a+ity& the syste2 ;ill :r*2:t the 'ser 4*r additi*n 2edia and +*ntin'e%

A.".: Se@)en'in% o- Re$(-1or(* A'&i.i&ies

At least *ne i2age 2'st eJist and 3e sele+ted 3e4*re the Media A::li+ati*n Entity +an 3e inv*-ed% $he *:erat*r +an insert ne; 2edia at any ti2e% $he Media A::li+ati*n Entity ;ill ;ait inde4initely 4*r 2edia t* 3e inserted 3e4*re starting t* ;rite t* the devi+e%

A.".4 Fi(e Me&$ In-or , $&ion O8&ions

$he i2 :le2entati*n in4*r2ati*n ;ritten t* the @ile Meta Header in ea+h 4ile isF

Table 86

DICOM Implementation Class and Version for Media Storage

)m$'ementation C'a.. #)D 1%2%1/G%112/5G%1%2120%0%1%0%1

A.!.".!.! A'&i.i&+-FSR-I , 8or& e<$, s

9hen syste2 'ser :resents the dire+t*ry *4 the 2edia& :resses NRest*re0 3'tt*n and the sele+ted eJa2s are trans4erred 4r* 2 the 2edia t* the syste2 4*r revie ;% !3)e+ts trans4erred t* the syste2 retain their *riginal S!, Instan+e =IDs%

$he Media A::li+ati*n Entity a+ts as an @SR 'sing the inter+hange *:ti*n ;hen re<'ested t* i2:*rt S!, Instan+es 4r* 2 2edia t* the l*+al data3ase%

A.!.".!.: A'&i.i&+-FSU-E<8or& e<$, s

$he syste2 'ser sele+ts eJa2s 4r* 2 the syste2 s dire+t*ry 4*r trans4er t* 2edia that already +*ntains data% $he DI" !MDIR is ':dated all* ;ing a++ess t* *riginal and ne ; data%

$he Media A::li+ati*n Entity a+ts as an @S= 'sing the inter+hange *:ti*n ;hen re<'ested t* eJ:*rt S!, Instan+es 4r* 2 the l*+al data3ase t* 2edia ':*n ;hi+h DI" !M data already resides%

A.!.".!.:."Me*i$ S&or$%e A88(i'$&ion Pro-i(es

See $a3le 01 4*r s'::*rted A::li+ati*n ,r*4iles%

A.!.".!.:."." O8&ions

$he Media A::li+ati*n Entity s'::*rts the S!, "lasses and $rans4er SyntaJes listed in the $a3le 3el* ;F

Table 88
IODs, SOP Classes and Transfer Syntaxes

Information Object Definition	SOP Class UID	Transfer Syntax	Transfer Syntax UID
D)CO& &edia Storage Director(	1.2.*40.1000*.1.3.1 0	27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1
#'tra.ound)mage Storage	1.2.*40.1000*.+.1.4. 1.1.6.1	27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1
#'tra.ound &u'ti;frame)mage Storage	1.2.*40.1000*.+.1.4. 1.1.3.1	27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1
Secondar(Ca$ture)mage Storage	1.2.*40.1000*.+.1.4. 1.1.7	27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1
Com$rehen.i0e S1 Storage	1.2.*40.1000*.+.1.4. 1.1.**.33	27$'icit , 1 =itt'e 2ndian	1.2.*40.1000*.1.2.1

A.: Me*i$ S&or$%e A88(i'$&ion Pro-i(e

See $a3le 01 4*r s' : :*rted A: :li+ati*n ,r*4iles%

T$0(e #"

S&)*+ Dire'&or+ Re'or*

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
D0004,1430E	CS	1	Director(1ecord H($e	SH#D/
D000*,0020E	DA	1	Stud(Date	A#HO
D000*,0030E	H&	1	Stud(Hime	A#HO
D0020,0010E	SC	1	Stud( )D	A#HO
D0020,000DE	#)	1C	Stud( )n.tance #)D	A#HO
D000*,00+0E	SC	2	Acce..ion 3um"er	& 8 =/#S21
D000*,1030E	=O	2	Stud(De.cri$tion	)f it i. a .chedu'ed e7am, the 0a'ue i. ma$$ed from Schedu'ed -rocedure Ste$ De.cri$tion)f not, #S21
D000*,0060E	-3		1eferring -h(.icianJ. 3ame	& 8 =/#S21

T$0(e #!

Series Dire'&or+ Re'or*

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
D0004,1430E	CS	1	Director(1ecord H($e	S21)2S
D000*,0060E	CS	1	&oda'it(	#S
D0020,0002E	#)	1	Serie.)n.tance #)D	A#HO
D0020,0011E	)S	1	Serie. 3um"er	A#HO
D000*,0021E	DA	3	Serie. Date	A#HO
D000*,0031E	H&	3	Serie. Hime	A#HO
D000*,103eE	=O		Serie. De.cri$tion	)f it i. a .chedu'ed e7am, the 0a'ue i. ma$$ed from Schedu'ed -rocedure Ste$ De.cri$tion)f not, .ame a. the 0a'ue of Stud(De.cri$tion
D000*,10+0E	-3		-erforming -h(.icianJ. 3ame	& 8 =/#S21

T$0(e #:

I , $%e Dire'&or+ Re'or*

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
D0004,1430E	CS	1	Director(1ecord H($e	)&A52
D0004,1+00E	CS	1C	1eferenced !i'e)D	A#HO

B SUPPORT OF C ; ARACTER SETS

In additi*n t* the de4a'lt +hara+ter re:ert*ire& the De4ined $er2s 4*r S:e+i4i+ "hara+ter Set in $a3le I4 are s' : :*rtedF

Table 94
Supported Specific Character Set Defined Terms

Character Set Description	Defined Term	System Language
)SO **+6;1	)SO<)1 100	2ng'i.h, !rench, 5erman,)ta'ian, -ortugue.e, S$ani.h, !inni.h, Dani.h,)ce'andic, 3orBegian, SBedi.h
)SO **+6;+	)SO<)1 144	1u..ian
)SO;**+6;2	)SO<)1 101	-o'i.h, CKech
)SO;**+6;6	)SO<)1 14*	Hur9i.h
Chine.e	5 41*030	Chine.e

I4 the syste2 lang'age is +*n4ig'red 4*r *ne *4 a3*ve lang'ages& the +*rres:*nding "hara+ter Set ;ill 3e 'sed a't*2ati+ally% 9hether *r n*t +hara+ters are dis:layed +*rre+tly de:ends *n the *:erating syste2% @*r eJa2:le& i4 the syste2 is +*n4ig'red 4*r $'r-ish& the +hara+ters *4 $'r-ish +*'ld dis:lay +*rre+tly%

8 ANNEXES

8." IOD 'on&en&s

8."." Cre$&e* SOP Ins&$n'es

N*ne%

8.".! Us$%e o- $&&ri0)&es -ro , re'ei.e* IOD(s

N* S ! , "lass s:e+i4i+ 4ields are re<'ired%

$he l*+al data3ase 2a-es 'se *4 the +*nventi*nal identi4i+ati*n attri3'tes t* disting'ish :atients& st'dies& series and instan+es% In :arti+'lar& i4 t; * :atients have the sa2e val'e 4*r ,atient ID& ,atient#s Na2e and ,atient#s SeJ& they ;ill 3e treated as the sa2e in the 3r*;ser and the l*+al data3ase%

8.".: A&&ri0)&e M$88in%

N*t a::li+a3le%

8.".4 Coer'e*/Mo*i-ie* -ie(*s

N* +*er+i*n is :er4*r2ed%

8.! D$&$ Di'&ion$r+ o- 8ri.$&e $&&ri0)&es

N* :rivate attri3'tes are de4ined%

8.: Co*e* &er , ino(o%+ $n* &e , 8($&es

$he val'e 4*r "*de Meaning ;ill 3e dis:layed 4*r all +*de se<'en+es% N* l*+al leJi+*n is :r*vided t* l**-':alternative +*de 2eanings%

8.4 Gr$+s'$(e l , $%e Consis&en'+

M*dality d*es n*t s'::*rt the Crays+ale Standard Dis:lay @'n+ti*n%

8.A S&$n*$r* e<&en*e*/s8e'i$(iFe*/8ri.$&e so8 C($sses

N*ne%

8.B Pri.$&e Tr$ns-er S+n&$<es

N*ne%

A. A$$endi7 › O4 N 5 / 3 .tructured re$orting tem$'ate

$his a: :endiJ lists the DI" ! M Str'+t'red Re: *rt >SR? 2a: :ings 'sed in the ! 3stetri+ and Cyne+*l*gi+ Str'+t'red Re: *rts *4 'ltras*'nd syste2 SR 4iles%

$he 2a: :ings are *rgani.ed in a 2anner si2ilar t* the DI" ! M SR $e2 :lates as des+ri3ed in , S 5%1G *4 the DI" ! M Standard% $he ! -CYN Re: *rt 2a: :ings 4*ll* ; the DI" ! M SR $e2 :late $ID /000F ! -CYN =ltras*'nd , r*+ed're Re: *rt& eJ+e:t ; here n*ted%

All :rivate +*de val'es 'se the "*ding S+he2e Designat*r RMR=SR%

A.". TID 3: 4 Me$s)re , en&

$his $e2 :late :r*vides a general str'+t're 4*r a n'2eri+ 2eas're2ent& t*gether ; ith eval'ati*ns *4 its n*r2ality and6*r signi4i+an+e& and the in4eren+e s*'r+e>s? 4*r its val'e%

NO	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			3#&	V&ea.urement	√		#nit. Q V#nit.
2	O	CAS CO3C2-H &OD	COD2	2, D5;C036, S1H, W&ea.urement &ethodWE	√		V&ethod
3	O	CAS CO3C2-H &OD	COD2	2, D121401, DC&, WDeri0ationWE	√		VDeri0ation
4	O	CAS CO3C2-H &OD	COD2	2, D5;C023, S1H, W!inding SiteWE	√		VHargetSite
+	OO	CAS CO3C2-H &OD	COD2	2, D5;C171, S1H, W=atera'it(WE	√		DC)D D244E =atera'it(
6	O	CAS -1O-21H)2 S	COD2	2, D121404, DC&,			

A.!. TID " 8 S)0>e'& Con&e<&7 Fe&)s

3O	3=	1e'ation Bith -arent	,a'ue H($e	Conce$t 3ame	#.ed in &ODA=)H/	Condition	,a'ue Set Con.traint
1			-3A&2	2, D121036,DC&, W&other of fetu.ME			
2			#)D12!	2, D12102*,DC&, WSu"Iect #)DME			
3			H2?H	2, D121030,DC&, WSu"Iect)DME			
4			H2?H	2, D116+1;1,=3, W!etu.)DME	X		
+			3#&	2, D11*7*;6,=3, W3um"er of !etu.e.ME	X		

A.:. TID 3A 4O9-GYN U(&r$so)n* Pro'e*)re Re8or&

$his is the te2:late 4*r the r**t *4 the +*ntent tree 4*r the ! -CYN 'ltras*'nd :r*+ed're re:*rt%

NO	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CO3HA)321	2, D12+000, DC&, LO4;5/3 #'tra.ound -rocedure 1e$ortME	√		
2	O	CAS CO3C2-H &OD	)3C=#D2	DH)D D1204E =anguage of Content)tem and De.cendant.			
3	O	CAS O4S CO3H2?H	)3C=#D2	DH)D D1001E O".er0ation Conte7t	√		
4	O	CO3HA)3S	)3C=#D2	DH)D D+001E -atient Characteri.tic.	√		
+	O	CO3HA)3S	CO3HA)321	DH D11102*, DC&, L)mage =i"rar(ME	√		

6	00	CO3HA)3S	)&A52	3o uro.e of reference	√		
7	0	CO3HA)3S	)3C=#D2	DH)D D+002E O4;5/3 -rocedure Summar(Section	√		
*	0	CO3HA)3S	)3C=#D2	DH)D D+004E !eta' 4iometr(1atio Section	√		
6	0	CO3HA)3S	)3C=#D2	DH)D D+00+E !eta' 4iometr(Section	√		
10	0	CO3HA)3S	)3C=#D2	DH)D D+006E =ong 4one. Section	√		
11	0	CO3HA)3S	)3C=#D2	DH)D D+007E !eta' Cranium Section	√		
12	0	CO3HA)3S	)3C=#D2	DH)D D+006E !eta' 4io$h(.ica' -rofi'e Section	√		
13	0	CO3HA)3S	)3C=#D2	DH)D D+011E 2ar'(5e.tation Section	√		
14	0	CO3HA)3S	)3C=#D2	DH)D D+010E Amniotic Sac Section	√		
1+	0	CO3HA)3S	)3C=#D2	DH)D D+01+E -e'0i. and #teru. Section	√		
16	0	CO3HA)3S	)3C=#D2	DH)D D+012E O0arie. Section	√		
17	0	CO3HA)3S	)3C=#D2	DH)D D+013E !o''ic'e. Section	√		V=atera'it(Q 2, D5;A101, S1H, L=eftME V3um"er Q 2, D11*76;4, =3, L3um"er of fo''ic'e. in 'eft o0ar(ME
1*	0	CO3HA)3S	)3C=#D2	DH)D D+013E !o''ic'e. Section	√		V=atera'it(Q 2, D5;A100, S1H, L1ightME V3um"er Q 2, D11**0;2, =3, L3um"er of fo''ic'e. in right o0ar(ME

16	0	CO3HA)3S	CO3HA)321	2, D121070, DC&, L!inding.ME	√		
20	00	CAS CO3C2-H &OD	COD2	2, D5;C023, S1H, L!inding SiteME	√		2, DH;!6*00, S1H, L2m"r(onic ,a.cu'ar StructureME
21	00	CO3HA)3S	)3C=#D2	DH)D D+02+E O4;5/3 !eta', a.cu'ar &ea.urement 5rou$	√		VAnatom(5rou$ Q DC)D D12141E !eta', a.cu'ature
22	0	CO3HA)3S	CO3HA)321	2, D121070, DC&, L!inding.ME	√		
23	00	CAS CO3C2-H &OD	COD2	2, D5;C023, S1H, L!inding SiteME	√		2, DH;D6007, S1H, L-e'0ic ,a.cu'ar StructureME
24	00	CO3HA)3S	)3C=#D2	DH)D D+026E O4;5/3 -e'0ic ,a.cu'ar &ea.urement 5rou$	√		VAnatom(5rou$ Q DC)D D12140E -e'0ic ,a.cu'ature Anatomica' =ocation
2+	0	CO3HA)3S	)3C=#D2	DH)D DS2=!H&-;1E	√		
26	0	CO3HA)3S	H2?H	D20121120,&1#S, L.e'f;defined; &ea.urementfi'eME	√		

A.4. TID 3SELFTMP-"4 Fe&$(C$r*i$' Me$s)re ,en& Gro)8

$his is a :rivate te2 :late re4eren+ed 3y $ID >/000?%

NO	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CO3HA)321	2, DH0001,&1#S,!ete' CardiacE	√		
2	0	CAS O4S CO3H2?H	)3C=#D2	DH)D D100*E Su"Iect Conte7t, !etu.	√		
3	0	CO3HA)3S	)3C=#D2	DH)D DS2=!H&-;2E !eta' RSCO12	√		V&ea.H($e Q DC)D DS2=!C)D;1E !eta' R;Score VDeri0ation Q DC)D D3627E &ea.urement H($e

A.A. TID 3SELFTMP-!4 Fe&$(HS'ore

$his is a :rivate te2 :late re4eren+ed 3y $ID >/000?%

NO	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1		CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		
2		CO3HA)3S	3#&	2, DC12017;1, &1#S, LR;Score "(!emur =engthME	√		ca'cu'ated "(V&ea.H($e and !emur =ength
3		CO3HA)3S	3#&	2, DC12017;2, &1#S, LR;Score "(4i$arieta' DiameterME	√		ca'cu'ated "(V&ea.H($e and 4i$arieta' Diameter
4		CO3HA)3S	3#&	2, DC12017;3, &1#S, LR;Score "(C'inica' 5e.tationa' AgeME	√		ca'cu'ated "(V&ea.H($e and C'inica' 5e.tationa' Age

A.B. TID 3" "4 O9SERVATION CONTEXT

$his te2 :late s:e+i4ies attri3'tes *4 *3servati*n +*nteJt that 2ay 3e de4ined& eJtended *r re:la+ed at any l*+ati*n in the SR tree%

NO	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1	0	CAS O4S CO3H2?H	COD2	2, D12100+,DC&, LO".er0er H($eME	√		D121006,DC&, L-er.onME
2	0	CAS O4S CO3H2?H	-3A&2	2, D12100*,DC&, L-er.on O".er0er 3ameME	√		O$erator from)nfo
3	0	CAS O4S CO3H2?H	H2?H	2, D121006,DC&, L -er.on O".er0erP. OrganiKation 3ameME	√		)n.titution 3ame D000*,00*0E of the 5enera' 2Aui$ment &odu'e
4	0	CAS O4S CO3H2?H	COD2	2, D121010,DC&, L -er.on O".er0erP. 1o'e in the OrganiKationME	√		D121063, DC&, WSonogra$herWE
+	0	CAS O4S CO3H2?H	COD2	2, D121024, DC&, WSu"Iect C'a..ME	√		D12102+, DC&, W-atientME

6	O	CAS O4S CO3H2?H	-3A&2	2, D121026,DC&, WSu"Iect 3ameME	√		0a'ue of -atientP. 3ame D0010,0010E in -atient &odu'e
7	O	CAS O4S CO3H2?H	DAH2	2, D121031,DC&, WSu"Iect 4irth DateME	X		0a'ue of -atientP. 4irth Date D0010,0030E in -atient &odu'e
*	O	CAS O4S CO3H2?H	COD2	2, D121032,DC&, WSu"Iect Se7ME	X		0a'ue eAui0a'ent to -atientP. Se7 D0010,0040E in -atient &odu'e
6	O	CAS O4S CO3H2?H	3#&	2, D121033,DC&, WSu"Iect AgeME	X		0a'ue of -atientP. Age D0010,1010E in -atient Stud(&odu'e

A.D. TID 3A "4 O9-GYN P$&ien& C=$r$'&eris&i's

NO	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CO3HA)321	2, D12111*, DC&, L-atient Characteri.tic.ME	√		
2	O	CO3HA)3S	H2?H	2, D121106, DC&, LCommentME			
3	O	CO3HA)3S	3#&	2, D*302;2, =3, L-atient CeightME			
4	O	CO3HA)3S	3#&	2, D26463;7, =3, L-atient 8eightME			
+	O	CO3HA)3S	3#&	2, D11666;6, =3, L5ra0idaME	√		from info
6	O	CO3HA)3S	3#&	2, D11677;6, =3, L-araME	√		from info
7	O	CO3HA)3S	3#&	2, D11612;6, =3, LA"ortaME	√		from info
*	O	CO3HA)3S	3#&	2, D3306+;4, =3, L2cto$ic -regnancie.ME	√		from infoD2cto$icE

1*	0	CO3HA)3S	H2?H	D)12101;04, &1#S, WC-H4 De.cri$tionWE	√		from info
	0	CO3HA)3S		D)12101;06, &1#S, W fo''ic'e;.timu'ating hormone WE	√		from info
	0	CO3HA)3S		D)12101;07, &1#S, W 'uteiniKing hormone WE	√		from info
	0	CO3HA)3S		D)12101;0*, &1#S, W e.tradio' WE	√		from info
	0	CO3HA)3S		D)12101;06, &1#S, W Serum $ro'actin WE	√		from info
	0	CO3HA)3S		D)12101;10, &1#S, W $roge.terone WE	√		from info
	0	CO3HA)3S		D)12101;11 &1#S, W te.to.terone WE	√		from info
	0	CO3HA)3S		D)12101;12, &1#S, Wc'omi$hene citrate WE	√		from info
	0	CO3HA)3S		D)12101;14, &1#S, Whuman meno$au.a' gonadotro$in WE	√		from info
	0	CO3HA)3S		D)12101;13, &1#S, W human chorionic gonadotro$in WE	√		from info
	0	CO3HA)3S	H2?H	D)12101;1+, &1#S, W Other. drug WE	√		from info
26	0	CO3HA)3S	H2?H	2, D121106, DC&, Comment E	√		re$ort interface Comment.
	0	CO3HA)3S	H2?H	D)12101;0+, &1#S, W-rom$tWE	√		re$ort interface -rom$t
	0	CO3HA)3S	H2?H	D121071, DC&, W!inding.WE	√		re$ort interface !inding.
	OO		)3C=#D2	DH)D D320E)mage or S$atia' Coordinate.			
	0	CO3HA)3S	)3C=#D2	4H)D D+003E O4;5/3 !etu. Summar(	√		

A.#. TID 3A :4 O9-GYN Fe&)s S),,$r+

NL RelV□V5h–)L.–2 q)BqL5v5□□VuD8□□Vqh.BL5v5□Bv.B–YBu)B□V5h–)L.q–VhvYv25hY□5–5□□V□VYL25iV5h–)L.q–Vtv)5□□V)

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CO3HA)321	DH D12+00*, DC&, L!etu. Summar(ME	√		
2	0	CAS O4S CO3H2?H	H2?H	2, D116+1;1,=3,W!etu.)DME	√		
3	0	CAS O4S CO3H2?H	3#&	2, D11*7*;6,=3, W3um"er of !etu.e.ME	√		
4	0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q D1*1*+;6, =3, W5e.tationa' AgeWE
+	0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q D11***;+, =3, W Com$o.ite #'tra.ound AgeWE
6	0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q D11**+;1, =3, W5e.tationa' Age "(=&-ME
7	0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q D11727;+, =3, W2.timated 8 eightME
*	0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q D11767;1, =3, W2!8 $ercenti'e ran9WE
6	0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q D1164*;7, =3, W !eta' Ceart 1ateWE
10	0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q DC12016;01, &1#S, W5e.tationa' Age "( ), !WE
11	0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q D)12016;01, &1#S, W5A of -re0iou. 27amWE

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
12	0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q DC12016;02, &1#S, W5e.tationa' Age "(-1 ,WE
13	0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q DC12016;03, &1#S, W5e.tationa' Age "(2DDWE
14	0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q DC12016;4, &1#S, W5e.tationa' Age "(2!8WE
1+	0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q DC12016;4, &1#S, W5e.tationa' Age "(mean 5e.tationa' Sac DiameterWE
16	0	CO3HA)3S	)3C=#D2	!)3D)35<1	√		
17	0	CO3HA)3S	)3C=#D2	!)3D)35<2	√		
1*	0	CO3HA)3S	)3C=#D2	!)3D)35<3	√		
16	0	CO3HA)3S	)3C=#D2	!)3D)35<4	√		
20	0	CO3HA)3S	)3C=#D2	!)3D)35<+	√		
21	0	CO3HA)3S	)3C=#D2	!)3D)35<6	√		
22	0	CO3HA)3S	)3C=#D2	!)3D)35<7	√		

A." . TID 3FINDING I"4 Fe&$(Des'ri8&ion

$his is a :rivate te2 :late re4eren+ed 3y $ID >/005?%

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Conditio n	Value Set Constrai nt
1		CO3HA) 3S	CO3HA)3 21	D!512016;01,&1#S,W!eta' De.cri$tionWE	√		
2	0	CO3HA) 3S	H2?H	D!51201*;02,&1#S,W!eta' =ieWE	√		

NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1		CO3HA)3S	CO3HA)321	D!54031;03,&1#S,W!etu.=im".WE	√		
2	0	CO3HA)3S	H2?H	D!54031;04,&1#S,W#$$er 27tremitie.WE	√		
3	0	CO3HA)3S	H2?H	D!54031;0+,&1#S,W=oBer 27tremitie.WE	√		

A."!. TID 3FINDINGI:4 Fe&$(C$r*io(o%+

$his is a :rivate te2 :late re4eren+ed 3y $ID >/005?%

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1		CO3HA)3S	CO3HA)321	D!54031;06,&1#S,W!eta' Cardio'og(WE	√		
2	0	CO3HA)3S	H2?H	D!512236;01,&1#S,WCardiac Acti0it(WE	√		
3	0	CO3HA)3S	H2?H	D!54031;07,&1#S,W4C C2A1HWE	√		
4	0	CO3HA)3S	H2?H	DH;42000,S3&3,WAortaWE	√		
+	0	CO3HA)3S	H2?H	DH;44000,S3&3,-u'monar(Arter(E	√		
6	0	CO3HA)3S	H2?H	D!53010;02,&1#S,A.cending AortaE	√		
7	0	CO3HA)3S	H2?H	D!53010;01,&1#S,WA1CCWE	√		
*	0	CO3HA)3S	H2?H	D!53010;03,&1#S,W Decrea.e A1CC WE	√		
6	0	CO3HA)3S	H2?H	DH;326+0,S1H,=eft , entricu'ar Outf'oB HractE	√		
10	0	CO3HA)3S	H2?H	DH;32++0,S1H,1ight , entric'e Outf'oB HractE	√		

A.":. TID 3FINDINGI44 Fe&$(9r$in

$his is a :rivate te2 :late re4eren+ed 3y $ID >/005?%

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1		CO3HA)3S	CO3HA)321	D!54030;01,&1#S,W!eta' 4rainWE	√		
2	O	CO3HA)3S	H2?H	D!54030;02,&1#S,W=atera' ,entric'e.WE	√		
3	O	CO3HA)3S	H2?H	D11*60;4,=3,WCi.terna &agnaWE	√		
4	O	CO3HA)3S	H2?H	DH;A600A,S3&3,WCere"e''umWE	√		
+	O	CO3HA)3S	H2?H	D!54030;03,&1#S,WCS-WE	√		

A."4. TID 3FINDINGIA4 S8ine

$his is a :rivate te2 :late re4eren+ed 3y $ID >/005?%

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1		CO3HA)3S	CO3HA)321	DH;11+00,S1H,WS$ineWE	√		
2	O	CO3HA)3S	H2?H	DH;11+01,S3&3,WCer0ica' S$ineWE	√		
3	O	CO3HA)3S	H2?H	DH;11+02,S3&3,WHhoracic S$ineWE	√		
4	O	CO3HA)3S	H2?H	DH;11+03,S3&3,W=um"ar S$ineWE	√		
+	O	CO3HA)3S	H2?H	D!54031;0*,&1#S,WSacra' S$ineWE	√		

A."A. TID 3FINDINGIB4 Fe&$(En.iron,en&

$his is a :rivate te2 :late re4eren+ed 3y $ID >/005?%

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1		CO3HA)3S	CO3HA)321	D!512016;03,&1#S,W!eta' 2n0ironmentWE	√		
2	O	CO3HA)3S	H2?H	D!512011;01,&1#S,W-'acenta' =ocationWE	√		

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
3	0	CO3HA) 3S	H2?H	D!512011;02,&1#S,WAmniotic !'uidWE	√		
4	0	CO3HA) 3S	H2?H	D!512011;03,&1#S,W-'acenta' 5radeWE	√		

A."B. TID 3FINDING ID4 M$&ern$(Des'ri8&ion

$his is a :rivate te2 :late re4eren+ed 3y $ID >/005?%

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1		CO3HA)3S	CO3HA)3 21	D!560**;01,&1#S,W&aterna' De.cri$tionWE	√		
2	0	CO3HA)3S	CO3HA)3 21	D!512011;03,&1#S,WAdne7aWE	√		
3	00	CO3HA)3S	H2?H	D5;A100,S3&3,1ightE	√		
4	00	CO3HA)3S	H2?H	D5;A101,S3&3,=eftE	√		
+	0	CO3HA)3S	CO3HA)3 21	DH;*7000,S1H,WO0ar(WE	√		
6	00	CO3HA)3S	H2?H	D5;A100,S3&3,1ightE	√		
7	00	CO3HA)3S	H2?H	D5;A101,S3&3,=eftE	√		
*	0	CO3HA)3S	CO3HA)3 21	DH;71000,S1H,Tidne(E	√		
6	00	CO3HA)3S	H2?H	D5;A100,S3&3,1ightE	√		
10	00	CO3HA)3S	H2?H	D5;A101,S3&3,=eftE	√		
11	0	CO3HA)3S	H2?H	D!54031;01,&1#S,W=#SWE	√		
12	0	CO3HA)3S	H2?H	DH;*3200,S1H,Cer0i7E	√		

A."D. TID 3A 44Fe&$(9io , e&r+ R$&io Se'&ion

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CO3HA)32 1	DH D12+001, DC&, L!eta' 4iometr(1atio.ME	√		
2	0	CAS O4S CO3H2?H	)3C=#D2	2, D116+1;1, =3, W!etu.)DME	√		
3	0	CAS O4S CO3H2?H	3#&	2, D11*7*;6,=3, W3um"er of !etu.e.ME	√		
4	0	CO3HA)3S	3#&	11647;6, =3, WCC/ACW	√		
+	0	CO3HA)3S	3#&	11*71;1, =3, W!=/ACW	√		
6	0	CO3HA)3S	3#&	11*72;6, =3, W!=/4-DW	√		
7	0	CO3HA)3S	3#&	D11*23;2, =3, WCe$ha'ic)nde7WE	√		
*	0	CO3HA)3S	3#&	D11*73;7, =3, W!=/CCWE	√		
6	0	CO3HA)3S	3#&	DC12004;01, &1#S, CrtC/HCE	√		
10	0	CO3HA)3S	3#&	DC12004;02, &1#S, WHCD/ACWE	√		
11	0	CO3HA)3S	3#&	DC12004;03, &1#S, =, 8/C8E	√		
12	0	CO3HA)3S	3#&	DC12004;04, &1#S, WCe$ha'ic)nde7 "(CCWE	√		

A."8. TID 3A A4 Fe&$(9io , e&r+ Se'&ion

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CO3HA)321	DH D12+002, DC&, M!eta' 4iometr(ME	√		
2	0	CAS O4S CO3H2?H	H2?H	2, D116+1;1,=3,			

4	0	CO3HA)3S	)3C=#D2	DH)D D+00*E !eta' 4iometr(5rou$	√		V4iometr(H($e Q &em"erOf YDC)D D12007E !eta' CraniumZ

A.!". TID 3A 84 Fe&$(9io ,e&r+ Gro)8

NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition

		Parent			Modality		Constraint
1			CO3HA)321	DH D12+006, DC&, M4io$h(.ica' -rofi'eME	√		
2	0	CAS O4S CO3H2?H	)3C=#D2	2, D116+1;1,=3, W!etu.)DME	√		
3	0	CAS O4S CO3H2?H	3#&	2, D11*7*;6,=3, W3um"er of !etu.e.ME	√		
4	0	CO3HA)3S	3#&	2, D11631;6, =3, L5ro.. 4od(&o0ementME	√		#nit. Q DH DLY0>2ZM, #C#&, Mrange 0>2ME
+	00	CAS -1O-21H)2S	H2?H	D121106, DC&, LCommentME	√		
6	0	CO3HA)3S	3#&	2, D11632;7, =3, L!eta' 4reathingME	√		#nit. Q DH DLY0>2ZM, #C#&, Mrange 0>2ME
7	00	CAS -1O-21H)2S	H2?H	D121106, DC&, LCommentME	√		
*	0	CO3HA)3S	3#&	2, D1163+;0, =3, L!eta' HoneME	√		#nit. Q DH DLY0>2ZM, #C#&, Mrange 0>2ME
6	00	CAS -1O-21H)2S	H2?H	D121106, DC&, LCommentME	√		
10	0	CO3HA)3S	3#&	2, D1163+;+, =3, L!eta' Ceart 1eacti0it(ME	√		#nit. Q DH DLY0>2ZM, #C#&, Mrange 0>2ME
11	00	CAS -1O-21H)2S	H2?H	D121106, DC&, LCommentME	√		
12	0	CO3HA)3S	3#&	2, D11630;1, =3, LAmniotic !'uid ,o'umeME	√		#nit. Q DH DLY0>2ZM, #C#&, Mrange 0>2ME
13	00	CAS -1O-21H)2S	H2?H	D121106, DC&, LCommentME	√		
14	0	CO3HA)3S	3#&	DH D11634;3, =3,	√		

				L4io$h(.ica' -rofi'e Sum ScoreME			
1+	00	CAS -1O-21H)2S	H2?H	D121106, DC&, LCommentME	√		

A.!:. TID 3A " 4A ,nio&i' S$' Se'&ion

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CO3HA)321	DH D121070, DC&, L!inding.ME			
2	O	CAS CO3C2-H &OD	COD2	2, D5;C023, S1H, L!inding SiteME			DH DH;!1300, S1H, MAmniotic SacME
3	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement			V&ea.urement Q DH D11627;7, =3, LAmniotic !'uid)nde7ME
4	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement			V&ea.urement Q D11624;4, =3, L!ir.t :uadrant DiameterME,
+	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement			V&ea.urement Q D11626;6, =3, Second :uadrant DiameterME
6	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement			V&ea.urement Q D1162+;1, =3, LHhird :uadrant DiameterME
7	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement			V&ea.urement Q D11623;6, =3, W!ourth :uadrant DiameterME
*	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement			V&ea.urement Q D&1200*;01,&1# S, WAmniotic !'uidWE

4	0 0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D11*26;6,=3, M=eft O0ar(8 idthME
+	0 0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D11*40;6, =3, M=eft O0ar(=engthME
6	0 0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D11*+7;0 , =3,M =eft O0ar(CeightME
7	0 0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D12164;0, =3, M=eft O0ar(,o'umeME
*	0	CO3HA)3S	)3C=#D2	2, DH;*7000, S1H, MO0ar(ME	√		V5rou$3ame Q 2, DH;*7000, S1H, MO0ar(ME
6	0 0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D11*30;7, =3, M1ight O0ar(8 idthME
10	0 0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D11*41;4, =3, M1ight O0ar(=engthME
11	0 0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D11*+*;*, =3, M1ight O0ar(CeightME
12	0 0	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D1216+;7, =3, M1ight O0ar(,o'umeME

A.!B. TID 3A ":4 Fo((i'(es Se'&ion

	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CO3HA)321	DH D121070, DC&, L!inding.ME	√		

2	O	CAS CO3C2-H &OD	COD2	2, D5;C023, S1H, L!inding SiteME	√		DH DH;*7600, S1H, LO0arian !o''ic'eME
3	O	CAS CO3C2-H &OD	COD2	2, D5;C171, S1H, L=atera'it(ME	√		V=atera'it(
4	O	CO3HA)3S	3#&	2, D11*76;4, =3, L3um"er of fo''ic'e. in 'eft o0ar(ME O1 2, D11**0;2, =3, L3um"er of fo''ic'e. in right o0ar(ME 3um"er of fo''ic'e. in the o0ar(.	√		
+	O	CO3HA)3S	)3C=#D2	DH)D D+014E !o''ic'e &ea.urement 5rou$	√		

A.!D. TID 3A "44 Fo((i'(e Me$s)re, en& Gro)8

	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CO3HA)321	2, D12+007, DC&, L&ea.urement 5rou$ME	√		
2	O	CAS O4S CO3H2?H	H2?H	2, D12+10, DC&, L)dentifierME	√		#niAue among a'' grou$. of .ame 'atera'it(
3	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D5;D70+, S1H, L, o'umeME

4	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D&11763;02, &1#S, L!o''ic'e d1ME
+	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D&11763;01, =3, L!o''ic'e d2ME
6	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D&11764;01, &1#S, L!o''ic'e d3ME
7	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D11763;7, =3, L!o''ic'e &eanDiamME
*	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D5;D70+;1, &1#S, L,o'umeME
6	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D&11763;0+ &1#S, LSmart !o''ic'e d1ME
10	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D&11763;06, =3, LSmart !o''ic'e d2ME
11	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D&11763;07, &1#S, LSmart !o''ic'e d3ME
12	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2, D&11763;04, &1#S, LSmart !o''ic'e &eanDiamME

A.!8. TID 3A "A4 Pe(.is An* U&er)s Se'&ion

	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CO3HA)321	DH D12+011, DC&, L-e'0i. and #teru.ME	√		
2	O	CO3HA)3S	CO3HA)321	V5rou$3ame	√		V5rou$3ame Q 2, DH;*3000, S1H, M#teru.ME

3	OO	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q V 8 idth V 8 idth Q 2 , D11*6+;3,=3,M #teru. 8 idthME
4	OO	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q V=engthV=ength Q 2 , D11*42;2, =3,M #teru. =engthME
+	OO	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q VCeightVCeight Q 2 , D11*+6;6, =3,M #teru. CeightME
6	OO	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q V ,o'umeV , o'ume Q 2 , D33162;6, =3, M#teru. , o'umeME
7	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2 , D=3,11661;0,Cer0i7 =engthE
*	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q 2 , D=3,1214+;6,2ndometriu m Hhic9ne..E
6	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q D&1#S,&12011;01,Cer0i7 CeightE
10	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q D&1#S,&12011;02,Cer0i7 8 idthE
11	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q D&1#S,C12011;03,#teru. 4od(E
12	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q D&1#S,C12011;04,#H<=/C ?<=E
13	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√		V&ea.urement Q D&1#S,&12011;03,&atri7 Tindne(=engthE

A.!#. TID 3A !A4 O9-GYN Fe&)s V$s')($r U(&r$so)n* Me$s)re , en& Gro)8

NL

A.:". CID 3!!84 E@)$&ion or T$0(e

CSD	CV	Code Meaning
DC&	121420	2Auation
DC&	121421	2Auation Citation
DC&	121424	Ha"'e of , a'ue.
DC&	121422	Ha"'e of , a'ue. Citation
DC&	121423	&ethod Citation

A.:!. CID 3!444 L$&er$(i&+

CSD	CV	Code Meaning
S1H	5;A100	1ight
S1H	5;A101	=eft
S1H	5;A102	1ight and 'eft
S1H	5;A103	#ni'atera'

A.::. CID 3:B!D4 Me$s)re , en& T+8e

CSD	CV	Code Meaning
S1H	1;00221	4e.t 0a'ue
S1H	1;00317	&ean
S1H	1;00316	&edian
S1H	1;00322	&ode
S1H	1;003++	-oint .ource mea.urement
S1H	1;003+3	-ea9 to $ea9
S1H	1;41D27	, i.ua' e.timation
S1H	1;10260	2.timated
S1H	1;41D2D	Ca'cu'ated
S1H	1;41D41	&ea.ured

A.:4. CID 3"! A4 Fe&$(9io , e&r+ Me$s)re , en&s

CSD	CV	Code Meaning
=3	11676;2	A"domina' Circumference
=3	11*1*;2	Anterior;-o.terior A"domina' Diameter
=3	11*16;0	Anterior;-o.terior Hrun9 Diameter

CSD	CV	Code Meaning
=3	11*20;*	4i$arieta' Diameter
=3	11*60;4	Ci.terna &agna
=3	11663;6	!emur =ength
=3	1166+;1	!oot 'ength
=3	116*4;2	Cead Circumference
=3	11*+1;3	Occi$ita';!ronta' Diameter
=3	116**;3	Hhoracic Circumference
=3	3306*;*	Hhoracic Area
=3	11*62;0	Hran0er.e A"domina' Diameter
=3	11*63;*	Hran. Cere"e''ar Diameter
=3	11*64;6	Hran.0er.e Hhoracic Diameter
=3	33161;*	A-AD @ HAD
&1#S	&1200+;04	!acia' ang'e
&1#S	&1200+;0+	!eta' Tidne('ength
&1#S	&1200+;01	Hhoracic Diameter
&1#S	&1200+;02	Ceart Circumference
&1#S	&12011;01	-'acenta' Hhic9ne..
&1#S	&1200+;03	Ceart Area

A.:A. CID 3"! B4 Fe&$(Lon% 9ones Me$s)re,en&s

CSD	CV	Code Meaning
=3	11666;6	Cumeru. 'ength
=3	11667;7	1adiu. 'ength
=3	11666;3	#'na 'ength
=3	1166*;+	Hi"ia 'ength
=3	11664;4	!i"u'a 'ength
=3	11662;*	C'a0ic'e 'ength
=3	11663;6	!emur =ength

A.:B. CID 3"! D4 Fe&$(Cr$ni),

CSD	CV	Code Meaning

CSD	CV	Code Meaning
=3	12171;+	=atera' , entrica' Bidth
=3	11*60;4	Ci.terna &agna 'ength
=3	12146;7	3ucha' !o'd thic9ne..
=3	33070;4	)nner Or"ita' Diameter
=3	11626;3	Outer Or"ita' Diameter
=3	11*63;*	Hran. Cere"e''ar Diameter
=3	33066;6	3ucha' Hran.'ucenc(
=3	12170;7	8 idth of Cemi.$here
&1#S	&12007;01	2ar =ength
&1#S	&12007;02	&idd'e -ha'an7 =ength
&1#S	&12007;03	Or"it
&1#S	&12007;04	O!DCC
&1#S	C12007;01	CCc

A.:D. CID 3"! #4 E$r(+ Ges&$&ion 9io , e&r+ Me$s)re , en&s

CSD	CV	Code Meaning
=3	116+7;*	CroBn 1um$ =ength
=3	11*+0;+	5e.tationa' Sac Diameter
=3	33071;2	S$ine =ength
=3	11*16;6	/o'9 Sac 'ength
=3	33066;6	3ucha' Hran.'ucenc(
&1#S	C12006;01	&ean 5e.tationa' Sac Diameter
&1#S	&12006;01	5e.tationa' Sac Diameter1
&1#S	&12006;02	5e.tationa' Sac Diameter2
&1#S	&12006;03	5e.tationa' Sac Diameter3

A.:8. CID 3"! ":4 Ges&$&ion$(A%e E@)$&ions $n* T$0(es

CSD	CV	Code Meaning
=3	11**+;1	5e.tationa' Age "(=&-
=3	11*62;7	AC, Cad'oc9 16*4
=3	11*63;+	AC, Jeant(16*4
=3	3314*;*	AC "(5A, &erK 16**
=3	11602;4	4-D, Cad'oc9 16*4

CSD	CV	Code Meaning
=3	11603;2	4-D, Can.mann 16*+
=3	1160+;7	4-D, Jeant(16*4
=3	330*2;6	4-D, O.a9a 16*6
=3	330*3;7	4-D, 1em$en 1661
=3	11606;+	4-D, TurtK 16*0
=3	330**;6	C'a0ica' 'ength, / ar9oni 16*+
=3	11610;7	C1=, Cad'oc9 1662
=3	11611;+	C1=, Can.mann 16*+
=3	11617;2	C1=, Jeant(16*4
=3	11613;1	C1=, 3e'.on 16*1
=3	33064;4	C1=, 1em$en 1661
=3	11614;6	C1=, 1o"in.on 167+
=3	3313*;6	!eta' Hrun9 Cro..;Sectiona' Area, O.a9a 16*6
=3	11620;6	!=, Cad'oc9 16*4
=3	11622;2	!=, Coh'er 16*2
=3	11623;0	!=, Jeant(16*4
=3	11626;7	5S, 1em$en 1661
=3	11632;1	CC, Cad'oc9 16*4
=3	33112;4	CC, Can.mann 16*+
=3	11634;7	CC, Jeant(16*4
=3	33111;6	CC deri0ed, Chitt(1667
=3	11636;2	Cumeru., Jeant(16*4
=3	33+44;*	O!D, Can.mann 16*+
=3	33134;*	HCD, Ci'' 1660
&1#S	!12013;+6	&SD, Ce''man1666
&1#S	!12013;01	AC, AS#& 2001
&1#S	!12013;02	AC,3ico'aide. 1664
&1#S	!12013;03	4-D, AS#& 2001
&1#S	!12013;04	4-D, &erK 1661
&1#S	!12013;0+	4-D, Ho9(o 16*6
&1#S	!12013;06	4-D;oo, Chitt(1664
&1#S	!12013;07	C1=, AS#& 2001
&1#S	!12013;0*	C1=, Ho9(o 16*6
&1#S	!12013;24	2!8, Ho9(o 16*6
&1#S	!12013;06	!=, AS#& 2001

CSD	CV	Code Meaning
&1#S	!12013;10	!=, Chitt(1667
&1#S	!12013;12	!=, &erK 1661
&1#S	!12013;13	!=, Ho9(o 16*6
&1#S	!12013;14	!=, 8 arda,16*+
&1#S	!12013;1+	5S, Ho9(o 16*6
&1#S	!12013;17	CC deri0ed, Chitt(1664
&1#S	!12013;16	CC, AS#& 2001
&1#S	!12013;1*	CC,3ico'aide. 1664
&1#S	!12013;16	Cumeru. =ength, AS#& 2001
&1#S	!12013;20	O!D, AS#& 2001
&1#S	!12013;21	O!D,3ico'aide. 1664
&1#S	!12013;22	OOD, Jeant(16*4
&1#S	!12013;23	HCD,3ico'aide. 1664
&1#S	!12013;24	HCD,Can.mann 16*+
&1#S	!12013;2+	5S, Can.mann 16*+
&1#S	!12013;26	!=, Can.mann 166+
&1#S	!12013;43	2!8, Cad'oc9 1661
&1#S	!12013;44	&ean Sac Diameter Da(a 1661
&1#S	!12013;4+	5S,China 1667
&1#S	!12013;46	C1=,China 1667
&1#S	!12013;47	4-D,China 1667
&1#S	!12013;4*	4-D,3ico'aide. 1664
&1#S	!12013;46	!=,China 1667
&1#S	!12013;+0	!=,3ico'aide. 1664
&1#S	!12013;+2	AC,Can.mann16*6
&1#S	!12013;+3	AC,C!2! CreAuat2000
&1#S	!12013;+4	AC,Chitt($'otted 1664
&1#S	!12013;++	C1=,1o"in.on h$ 4&#S 167+
&1#S	!1201+;22	!=,O.a9a 16*6

A.:#. CID 3"! "44 Fe&$(9o*+ 1ei%=&

CSD	CV	Code Meaning
=3	11736;0	2!8 "(AC and 4-D, She$ard 16*2

CSD	CV	Code Meaning
=3	117+6;4	2! 8 "(AC, Cam$"e'' 167+
=3	33144;7	2! 8 "(4-D, A-AD, HAD, !=, Ho9(o 16*7
=3	1173+;*	2! 8 "(AC, 4-D, !=, Cad'oc9 16*+
=3	11732;+	2! 8 "(AC, 4-D, !=, CC, Cad'oc9 16*+
=3	117+1;+	2! 8 "(AC, !=, Cad'oc9 16*+
=3	11746;+	2! 8 "(AC, !=, CC, Cad'oc9 16*+
=3	11**4;4	A0erage #'tra.ound Age
&1#S	!12013;27	C#A "(4-D, Cad'oc9 16*4
&1#S	!12013;2*	C#A "(AC, Cad'oc9 16*4
&1#S	!12013;26	C#A "(CC, Cad'oc9 16*4
&1#S	!12013;30	C#A "(!=, Cad'oc9 16*4
&1#S	!12013;31	C#A "(4-D, CC, Cad'oc9 16*4
&1#S	!12013;32	C#A "(4-D, AC, Cad'oc9 16*4
&1#S	!12013;33	C#A "(4-D, !=, Cad'oc9 16*4
&1#S	!12013;34	C#A "(CC, AC, Cad'oc9 16*4
&1#S	!12013;3+	C#A "(CC, !=, Cad'oc9 16*4
&1#S	!12013;36	C#A "(AC, !=, Cad'oc9 16*4
&1#S	!12013;37	C#A "(4-D, CC, AC, Cad'oc9 16*4
&1#S	!12013;3*	C#A "(4-D, CC, !=, Cad'oc9 16*4
&1#S	!12013;36	C#A "(4-D, AC, !=, Cad'oc9 16*4
&1#S	!12013;40	C#A "(CC, AC, !=, Cad'oc9 16*4
&1#S	!12013;41	C#A "(4-D, CC, AC, !=, Cad'oc9 16*4
&1#S	!12014;01	2! 8 "(AC,4-D,&erK 1661
&1#S	!12014;02	2! 8 "(AC,&erK 1661
&1#S	!12014;03	2! 8 "(4-D, HHD, Can.mann 166+
&1#S	!12014;04	2! 8 "(4-D, !HA, !=, O.a9a 16*3

A.4 . CID 3"! "A4 Fe&$(Gro / &= E@)$&ions $n* T$0(es

CSD	CV	Code Meaning
=3	33146;2	AC "(5A, Cad'oc9 16*4
=3	33+46;3	AC Dderi0edE "(5A, Chitt(1664
=3	3316*;3	4-D "(5A, Cad'oc9 16*4
=3	331+2;0	outer;outer "(5A, Chitt(1664
=3	331++;3	4-D "(5A, 1em$en 1661

CSD	CV	Code Meaning
=3	33160;3	C1= "(5A, 1em$en1661
=3	33166;0	!= "(5A, Cad'oc9 16*4
=3	33167;*	!= "(5A, Chitt(1664
=3	33171;0	5S "(5A, 1em$en 1661
=3	33173;6	CC "(5A, Cad'oc9 16*4
=3	33174;4	CC deri0ed "(5A, Chitt(1664
=3	331*1;6	HCD "(5A 5o'd.tein 16*7
=3	33067;7	!i"u'a, Jeant(16*3
=3	33126;4	1adiu., Jeant(16*3
&1#S	!1201+;01	AC "(5A, AS#& 2001
&1#S	!1201+;02	AC "(5A, &erK 1661
&1#S	!1201+;03	AC, Jeant(16*4
&1#S	!1201+;04	A-AD,&erK 1661
&1#S	!1201+;0+	4-D "(5A, AS#& 2001
&1#S	!1201+;06	4-D, Can.mann 16*+
&1#S	!1201+;07	4-D "(5A, &erK 16**
&1#S	!1201+;0*	4-D,TurtK,16*0
&1#S	!1201+;06	4-D,Sa""agha 167*
&1#S	!1201+;10	4-D, Ho9(o 16*6
&1#S	!1201+;12	C'a0ica' 'ength, / ar9oni 16*+
&1#S	!1201+;13	C1= "(5A AS#& 2001
&1#S	!1201+;14	C1=, Can.mann 16*+
&1#S	!1201+;1+	C1=, 1o"in.on 167+
&1#S	!1201+;16	C1=, Ho9(o 16*6
&1#S	!1201+;17	2! 8 "(5A, Cad'oc9 16*4
&1#S	!1201+;1*	!= "(5A, AS#& 2001
&1#S	!1201+;16	!=, Can.mann 166+
&1#S	!1201+;20	!= "(5A, &erK 1661
&1#S	!1201+;21	!=, O|4rien,16*1
&1#S	!1201+;22	!=, O.a9a 16*6
&1#S	!1201+;23	!=, Ho9(o, 16*6
&1#S	!1201+;24	!=, 8 arda,16*+
&1#S	!1201+;2+	!)4,&erK,1661
&1#S	!1201+;26	!HA, O.a9a 16*6
&1#S	!1201+;27	CC "(5A, AS#& 2001

=3	12023;*	1e.i.ti0it( )nde7
=3	12144;2	S(.to'ic to Dia.to'ic ,e'ocit(1atio
&1#S	&12116;04	Dia.to'ic to S(.to'ic ,e'ocit(1atio
&1#S	C12121;1	S(.to'ic to Atria' Contraction ,e'ocit(1atio
&1#S	C12120;1	-ea9 2ar'(Dia.to'ic ,e'ocit(
&1#S	C12121;2	-ea9 0e'ocit(inde7 for the 0ein

A.44. CID 3"!"!!4 O&=er V$s')($r Pro8er&ies

CSD	CV	Code Meaning
=3	2016*;1	Acce'eration Hime
=3	20217;6	Dece'eration Hime
S1H	1;102+C	,e..e')ntima' Diameter
=3	20247;3	-ea9 5radient
=3	202+6;4	&ean 5radient
=3	203+4;7	,e'ocit(Hime)ntegra'
=3	1164*;7	!eta' Ceart 1ate
=3	**67;4	Ceart rate
&1#S	&12116;02	Ang'e
&1#S	&12116;01	&ean ,e'ocit(&ean -re..ure 5radient
&1#S	&12116;06	,o' !'oBDHA&A?U,AS<A12AE
&1#S	&12116;07	,o' !'oBDHA&2A3U,AS<A12AE
S1H	5;0366	,e..e' 'umen cro..;.ectiona' area

A.4A. CID 3"!"4 4 Pe(.i' V$s')($&)re An$&o,i'$(Lo'$&ion

CSD	CV	Code Meaning
S1H	H;466*0	O0arian Arter(
S1H	H;46*20	#terine Arter(

A.4B. CID 3"!"4"4 Fe&$(V$s')($&)re An$&o,i'$(Lo'$&ion

CSD	CV	Code Meaning
S1H	H;42000	Aorta
S1H	H;D076+	De.cending Aorta
S1H	H;42100	A.cending Aorta
S1H	H;326+0	=eft ,entricu'ar Outf'oB Hract
	H;32++0	1ight ,entric'e Outf'oB Hract

S1H	H;4+600	&idd'e Cere"ra' Arter(
&1#S	,12141;01	Ductu. ,eno.u.
S1H	H;!1*10	#m"i'ica' Arter(
S1H	H;!1*20	#m"i'ica' ,ein
S1H	H;!1412	,ite''ine Arter(of -'acenta

A.4D. CID 3SELFCID-"4 Fe&$(H-S'ore

CSD	CV	Code Meaning
=3	1*01+;*	Aortic 1oot Diameter
=3	1*012;+	A.cending Aortic Diameter
=3	1*013;3	De.cending Aortic Diameter
=3	1*016;0	=eft -u'monar(Arter(Diameter
=3	1*021;6	1ight -u'monar(Arter(Diameter
=3	1*020;*	&ain -u'monar(Arter(Diameter
=3	1*1+4;+	)nter0entricu'ar Se$tum Dia.to'ic Hhic9ne..
=3	1*1+*;6	)nter0entricu'ar Se$tum S(.to'ic Hhic9ne..
&1#S	&1*01+;*	Aortic 1oot DiameterDR ScoreE
&1#S	&1*020;*	&ain -u'monar(Arter(DiameterDR ScoreE
&1#S	C12201;06	=eft ,entricu'ar Diameter/1ight ,entricu'ar Diameter
&1#S	C12201;07	=eft ,entricu'ar Diameter/1ight ,entricu'ar DiameterDR ScoreE
&1#S	C1220+;03	=eft Atrium Diameter / 1ight Atrium Diameter
&1#S	C1220+;04	=eft Atrium Diameter / Aorta Diameter
&1#S	C1220+;0+	=eft Atrium Diameter / Aorta DiameterDR ScoreE
&1#S	C12212;01	Aorta Diameter/&ain -u'monar(Arter(Diameter
&1#S	C12212;03	Aorta Diameter/&ain -u'monar(Arter(DiameterDR ScoreE
&1#S	&12201;01	=eft 0entricu'ar .hort;a7i. diameter at end dia.to'e
&1#S	&12201;0*	=eft 0entricu'ar .hort;a7i. diameter at end dia.to'eDR ScoreE
&1#S	&12201;02	=eft 0entricu'ar .hort;a7i. diameter at end .(.to'e
&1#S	&12201;03	=eft 0entricu'ar Diameter
&1#S	&12201;06	=eft 0entricu'ar DiameterDR ScoreE
&1#S	&12201;04	inter0entricu'ar .e$ta' thichne..
&1#S	&12201;0+	=eft ,entricu'ar Outf'oB Hract Diameter
&1#S	&12204;01	1ight 0entricu'ar .hort;a7i. diameter at end dia.to'e
&1#S	&12204;07	1ight 0entricu'ar .hort;a7i. diameter at end dia.to'eDR ScoreE
&1#S	&12204;02	1ight 0entricu'ar .hort;a7i. diameter at end .(.to'e

&1#S	&12204;03	1ight 0entricu'ar Diameter
&1#S	&12204;0*	1ight 0entricu'ar DiameterDR ScoreE
&1#S	&12204;06	1ight 0entricu'ar areaDR ScoreE
&1#S	&12204;04	1ight 0entricu'ar area
&1#S	&12206;01	1ight Atrium Diameter
&1#S	&12204;0+	1ight ,entricu'ar Outf'oB Hract Diameter
&1#S	&1220+;01	=eft Atrium Diameter
&1#S	&1220+;02	=eft Atrium area
&1#S	&12206;02	1ight Atrium area

!=	11663;6,=3,!emur =ength
CC	116*4;2,=3,Cead Circumference
O!D	11*+1;3,=3,Occi$ita';!ronta' Diameter
A-AD	11*1*;2,=3,Anterior;-o.terior A"domina' Diameter
HC	116**;3,=3,Hhoracic Circumference
HAD	11*62;0,=3,Hran0er.e A"domina' Diameter
HHD	11*64;6,=3,Hran.0er.e Hhoracic Diameter
A-HD	11*16;0,=3,Anterior;-o.terior Hrun9 Diameter
!HA	3306*;*,=3,Hhoracic Area
HCD	11*63;*,=3,Hran. Cere"e''ar Diameter
!oot	1166+;1,=3,!oot 'ength
Ci.t &agna	11*60;4,=3,Ci.terna &agna
A?H	33161;*,=3,A-AD @ HAD
!;9idne(	&1200+;0+, &1#S, !eta' Tidne('ength
HCD	&1200+;01,&1#S,Hhoracic Diameter
CrtC	&1200+;02,&1#S,Ceart Circumference
C#&	11666;6,=3,Cumeru. 'ength
1AD	11667;7,=3,1adiu. 'ength
#'na	11666;3,=3,#'na 'ength
Hi"ia	1166*;+,=3,Hi"ia 'ength
!)4	11664;4,=3,!i"u'a 'ength
C=A,	11662;*,=3,C'a0ic'e 'ength
=, 8	12171;+,=3,=atera' ,entrica' Bidth
3!	12146;7,=3,3ucha' !o'd thic9ne..
)OD	33070;4,=3,)nner Or"ita' Diameter
OOD	11626;3,=3,Outer Or"ita' Diameter
HCD	11*63;*,=3,Hran. Cere"e''ar Diameter
3H	33066;6,=3,3ucha' Hran.'ucenc(
C 8	12170;7,=3, 8 idth of Cemi.$here
2ar	&12007;01,&1#S,2ar =ength
&-	&12007;02,&1#S,&idd'e -ha'an7 =ength
Or"it	&12007;03,&1#S,Or"it
O!DDCCE	&12007;04,&1#S,O!DCC
CCDcE	C12007;01,&1#S,CCc

A!1	11624;4,=3,!ir.t :uadrant Diameter
A!2	11626;6,=3,Second :uadrant Diameter
A!3	1162+;1,=3,Hhird :uadrant Diameter
A!4	11623;6,=3,!ourth :uadrant Diameter
A!	&1200*;01,&1#S,Amniotic !'uid
C1=	116+7;*,=3,CroBn 1um$ =ength
5S	11*+0;+,=3,5e.tationa' Sac Diameter
,erte"rae	33071;2,=3,S$ine =ength
/S	11*16;6,=3,/o'9 Sac 'ength
3H	33066;6,=3,3ucha' Hran.'ucenc(
&ean Sac Diam	C12006;01,&1#S,&ean 5e.tationa' Sac Diameter
Cer0i7 =	11661;0,=3,Cer0i7 =ength
Cer0i7 =	11661;0,=3,Cer0i7 =ength
2ndo	1214+;6,=3,2ndometrium Hhic9ne..
Cer0i7 C	&12011;01,&1#S,Cer0i7 Ceight
Cer0i7 8	&12011;02,&1#S,Cer0i7 8idth
#teru. 4od(	C12011;03,&1#S,#teru. 4od(
#H;=/C?;=	C12011;04,&1#S,#H<=/C?<=
&at Tidne(	&12011;03,&1#S,&atri7 Tindne(=ength
A!)	11627;7,=3,Amniotic !'uid)nde7
O0ar(8	11*26;6, =3, =eft O0ar(8idth 11*30;7, =3, 1ight O0ar(8idth
O0ar(=	11*40;6, =3, =eft O0ar(=ength 11*41;4, =3, 1ight O0ar(=ength
O0ar(C	11*+7;0, =3, =eft O0ar(Ceight 11*+*;*, =3, 1ight O0ar(Ceight
O0ar(,o'	12164;0, =3, =eft O0ar(,o'ume 1216+;7, =3, 1ight O0ar(,o'ume
!o''ic'e =	&11763;02, &1#S, !o''ic'e =ength
#H 8	11*6+;3,=3,#teru. 8idth
#H =	11*42;2,=3,#teru. =ength
#H C	11*+6;6,=3,#teru. Ceight
#H ,o'	33162;6,=3,#teru. ,o'ume
!o''ic'e 8	&11763;01,&1#S,!o''ic'e 8idth
!o''ic'e1 Hhic9	&11764;01,&1#S,!o''ic'e Hhic9ne..
!o''ic'e ,o'	5;D70+,S1H, ,o'ume
!o''ic'e Diam	11763;7,=3,!o''ic'e Diameter
2!81	11727;+,=3,2.timated 8eight

2!82	11727;+,=3,2.timated 8eight
C-	11767;1,=3 2!8 $ercenti'e ran9
#-	11767;1,=3 2!8 $ercenti'e ran9
C-	11767;1,=3 2!8 $ercenti'e ran9
#-	11767;1,=3 2!8 $ercenti'e ran9
2!8DCam$"e''E	11727;+,=3,2.timated 8eight
2!8DCad'oc91E	11727;+,=3,2.timated 8eight
2!8DCad'oc92E	11727;+,=3,2.timated 8eight
2!8DCad'oc93E	11727;+,=3,2.timated 8eight
2!8DCad'oc94E	11727;+,=3,2.timated 8eight
2!8DCan.mannE	11727;+,=3,2.timated 8eight
2!8D&erK1E	11727;+,=3,2.timated 8eight
2!8D&erK2E	11727;+,=3,2.timated 8eight
2!8DO.a9aE	11727;+,=3,2.timated 8eight
2!8DShe$ardE	11727;+,=3,2.timated 8eight
2!8DHo9(oE	11727;+,=3,2.timated 8eight
-= Hhic9ne..	&12011;01,&1#S,-'acenta' Hhic9ne..
CrtA	&1200+;03,&1#S,Ceart Area
!acia' ang'e	&1200+;04,&1#S,!acia' ang'e
Sac Diam1	&12006;01,&1#S,5e.tationa' Sac Diameter1
Sac Diam2	&12006;02,&1#S,5e.tationa' Sac Diameter2
Sac Diam3	&12006;03,&1#S,5e.tationa' Sac Diameter3

A.48.!. V$s')($&)re An$&o,i' Lo'$&ion

O0arian A	H;466*0, S1H, O0arian Arter(
#t A	H;46*20, S1H, #terine Arter(
!eta' Ao	H;42000, S1H, Aorta
De.c Aorta	H;D076+, S1H, De.cending Aorta
A.c Aorta	H;42100,S1H,A.cending Aorta
1,OH	H;32++0,S1H,1ight 0entric'e outf'oB tract
=,OH	H;326+0,S1H,=eft 0entric'e outf'oB tract
&CA	H;4+600, S1H, &idd'e Cere"ra' Arter(
Duct ,eno	,12141;01, &1#S, Ductu. ,eno

#m" A	H;!1*10, S1H, #m"i'ica' Arter(
#m" ,	H;!1*20, S1H, #m"i'ica' , ein
-'acenta A	H;!1412, S1H, , ite''ine Arter(of -'acenta

A.48.:. O9-GYN V$s')($r Me$s)re,en&s

[,a.cu'ature Anatomic =ocationO 2D	116+3;3, =3, 2nd Dia.to'ic ,e'ocit(
[,a.cu'ature Anatomic =ocationO &D	1166+;7 , =3, &inimum Dia.to'ic ,e'ocit(
[,a.cu'ature Anatomic =ocationO -S	11726;7, =3, -ea9 S(.to'ic ,e'ocit(
[,a.cu'ature Anatomic =ocationO HA&2A3	203+2;1, =3, Hime a0eraged mean 0e'ocit(
[,a.cu'ature Anatomic =ocationO HA&A?	11662;1, =3, Hime a0eraged $ea9 0e'ocit(
[,a.cu'ature Anatomic =ocationO -,	11726;7, =3, -ea9 ,e'ocit(
[,a.cu'ature Anatomic =ocationO -)	1200*;6, =3, -u'.ati'it( )nde7
[,a.cu'ature Anatomic =ocationO 1)	12023;*, =3, 1e.i.ti0it( )nde7
[,a.cu'ature Anatomic =ocationO S/D	12144;2, =3, S(.to'ic to Dia.to'ic ,e'ocit(1atio
[,a.cu'ature Anatomic =ocationO D/S	&12116;04, &1#S, Dia.to'ic to S(.to'ic,e'ocit(1atio
[,a.cu'ature Anatomic =ocationO AH	2016*;1, =3, Acce'eration Hime
[,a.cu'ature Anatomic =ocationO DH	20217;6, =3, Dece'eration Hime

.87915(-)3.5-7.53504a)-4[,a.cu'ature Anatomic =ocationO 1)-7.75 872(,)-3.87915(-)3

[R.Score.O- , .Diam	&12206;1,&1#S,-u'monar(, a'0e DiameterDR ScoreE
[R.Score.O) , C.Diam	&1221+;1,&1#S,)nferior , ene Ca0a DiameterDR ScoreE
&-A Diam	&ain -u'monar(Arter(Diameter
[R.Score.O &-A Diam	&1*020;*,&1#S,&ain -u'monar(Arter(DiameterDR ScoreE
=-A.Diam	1*016;0,=3,=eft -u'monar(Arter(Diameter
1-A.Diam	1*021;6,=3,1ight -u'monar(Arter(Diameter
[R.Score.ODuct.Art	&12212;1,&1#S,Duct Aorta DiameterDR ScoreE
[R.Score.OH , .Diam	&1220*;1,&1#S,Hricu.$id , a'0e DiameterDR ScoreE
[R.Score.O& , .Diam	&12207;1,&1#S,&itra' , a'0e DiameterDR ScoreE
) , Sd	1*1+4;+, =3,)nter0entricu'ar Se$tum Dia.to'ic Hhic9ne..
) , S.	1*1+*;6, =3,)nter0entricu'ar Se$tum S(.to'ic Hhic9ne..
= , D/1 , D	C12201;06,&1#S,=eft , entricu'ar Diameter/1ight , entricu'ar Diameter
[R.Score.O = , D/1 , D	C12201;07,&1#S,=eft , entricu'ar Diameter/1ight , entricu'ar DiameterDR ScoreE
=AD/1AD	C1220+;03,&1#S,=eft Atrium Diameter / 1ight Atrium Diameter
=AD/AoD	C1220+;04,&1#S,=eft Atrium Diameter / Aorta Diameter
[R.Score.O =AD/AoD	C1220+;0+,&1#S,=eft Atrium Diameter / Aorta DiameterDR ScoreE
AoD/&-AD	C12212;01,&1#S,Aorta Diameter/&ain -u'monar(Arter(Diameter
[R.Score.O AoD/&-AD	C12212;03,&1#S,Aorta Diameter/&ain -u'monar(Arter(DiameterDR ScoreE
= ,)Dd	&12201;01,&1#S,=eft 0entricu'ar .hort;a7i. diameter at end dia.to'e
[R.Score.O = ,)Dd	&12201;0*,&1#S,=eft 0entricu'ar .hort;a7i. diameter at end dia.to'eDR ScoreE
= ,)D.	&12201;02,&1#S,=eft 0entricu'ar .hort;a7i. diameter at end .(.to'e
= , Diam	&12201;03,&1#S,=eft 0entricu'ar Diameter
[R.Score.O = , Diam	&12201;06,&1#S,=eft 0entricu'ar DiameterDR ScoreE
) , S	&12201;04,&1#S,inter0entricu'ar .e$ta' thichne..
= , OH Diam	&12201;0+,&1#S,=eft , entricu'ar Outf'oB Hract Diameter
1 ,)Dd	&12204;01,&1#S,1ight 0entricu'ar .hort;a7i. diameter at end dia.to'e
[R.Score.O 1 ,)Dd	&12204;07,&1#S,1ight 0entricu'ar .hort;a7i. diameter at end dia.to'eDR ScoreE
1 ,)D.	&12204;02,&1#S,1ight 0entricu'ar .hort;a7i. diameter at end .(.to'e
1 , Diam	&12204;03,&1#S,1ight 0entricu'ar Diameter
[R.Score.O 1 , Diam	&12204;0*,&1#S,1ight 0entricu'ar DiameterDR ScoreE
1A Diam	&12206;01,&1#S,1ight Atrium Diameter
1 , Area	&12204;04,&1#S,1ight 0entricu'ar area
[R.Score.O 1 , Area	&12204;06,&1#S,1ight 0entricu'ar areaDR ScoreE
1 , OH Diam	&12204;0+,&1#S,1ight , entricu'ar Outf'oB Hract Diameter
=A Diam	&1220+;01,&1#S,=eft Atrium Diameter
=A Area	&1220+;02,&1#S,=eft Atrium area
1A Area	&12206;02,&1#S,1ight Atrium area
= , Area	&12240;01,&1#S,=eft 0entricu'ar area
[R.Score.O = , Area	&12240;02,&1#S,=eft 0entricu'ar areaDR ScoreE
RScore!=	C12017;1,&1#S,R;Score "(!emur =ength
RScore4-D	C12017;2,&1#S,R;Score "(4ieentricu'ar

A.48.A. 9io8=+si'$(Pro-i(e Me$s)re , en&s

!&	11631;6,=3,5ro.. 4od(&o0ement
!4&	11632;7,=3,!eta' 4reathing
!H	1163+;0,=3,!eta' Hone
!C1	1163+;+,=3,!eta' Ceart 1eacti0it(
A!	11630;1,=3,Amniotic !'uid , o'ume
Hota' Score	11634;3,=3,4io$h(.ica' -rofi'e Sum Score
!eta' =ie	!51201*;02,&1#S,!eta' =ie
5ender	!574++;01,&1#S,5ender
3 , e..e' Cord	!57160;01,&1#S,3 , e..e' Cord
!ace	H;D1200,S3&3,!ace
3o.e =i$.	!54;01,&1#S,3o.e =i$.
Cord in.ertion	!512011;01,&1#S,Cord in.ertion
=#S	!54031;02,&1#S,=#S
Stomach	H;+7000,S3&3,Stomach
=eft Tidne(	H;71000,S1H,Tidne(
1ight Tidne(	H;71000,S1H,Tidne(
4'adder	H;74000,S1H,4'adder
5a'' 4'adder	H;63000,S1H,5a'' "'adder
=i0er	H;62000,S1H,=i0er
!eta' 4oBe'	!54031;03,&1#S,!eta' 4oBe'
#$$er 27tremitie.	!54031;0+,&1#S,#$$er 27tremitie.
=oBer 27tremitie.	!54031;06,&1#S,=oBer 27tremitie.
Cardiac Acti0it(	!512236;01,&1#S,Cardiac Acti0it(
4C C2A1H	!54031;0*,&1#S,4C C2A1H
Aorta	H;42000,S3&3,Aorta
-u'monar(Arter(	H;44000,S3&3,-u'monar(Arter(
A1CC	!53010;01,&1#S,A1CC
=, OH	H;326+0,S1H,=eft , entricu'ar Outf'oB Hract
1, OH	H;32++0,S1H,1ight , entric'e Outf'oB Hract
=atera' , entric'e.	!54030;02,&1#S,=atera' , entric'e.
Ci.terna &agna	11*60;4,=3,Ci.terna &agna
Cere"e''um	H;A600A,S3&3,Cere"e''um
CS-	!54030;03,&1#S,CS-
Cer0ica' S$ine	H;11+01,S3&3,Cer0ica' S$ine
Hhoracic S$ine	H;11+02,S3&3,Hhoracic S$ine
=um"ar S$ine	H;11+03,S3&3,=um"ar S$ine
Sacra' S$ine	!54031;,&1#S,Sacra' S$ine
-'acenta' =ocation	!512011;01,&1#S,-'acenta' =ocation
Amniotic !'uid	!512011;02,&1#S,Amniotic !'uid
-'acenta' 5rade	!512011;03,&1#S,-'acenta' 5rade

Adne7a	!512011;03,&1#S,Adne7a
O0arie.	H;*7000,S1H,O0ar(
Tidne(	H;71000,S1H,Tidne(
Cer0i7	H;*3200,S1H,Cer0i7

4. A$$endi7 › Cardiac .tructured re$orting tem$'ate

$his a::endiJ lists the DI"!M Str'+t'red Re:*rt >SR? 2a::ings 'sed in the "ardia+ Str'+t'red Re:*rts *4 'ltras*'nd syste2 SR 4iles%

$he 2a::ings are *rgani.ed in a 2anner si2ilar t* the DI"!M SR $e2:lates as des+ri3ed in ,S 5%1G *4 the DI"!M Standard% $he "ardia+ Re:*rt 2a::ings 4*ll*; the DI"!M SR $e2:late $ID /200F "ardia+ =ltras*'nd ,r*+ed're Re:*rt& eJ+e:t ;here n*ted%

All :rivate +*de val'es 'se the "*ding S+he2e Designat*r RMR=SR%

9.". TID 3A! 4E'=o'$r*io%r$8=+ Pro'e*)re Re8or&

$his te2:late 4*r2s the t*: *4 a +*ntent tree that all*;s an 'ltras*'nd syste2 t* des+ri3e the res'lts *4 an ad'lt e+h*+ardi*gra:hy i2aging :r*+ed're%

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CO3HA)321	2, D12+200, DC&, LAdu't 2chocardiogra$h(-rocedure 1e$ortME			
2	0	CAS CO3C2-H &OD	)3C=#D2	DH)D D1204E =anguage of Content)tem and De.cendant.			
3	0	CAS O4S CO3H2?H	)3C=#D2	DH)D D1001E O".er0ation Conte7t			
4	0	CO3HA)3S	)3C=#D2	DH)D D+201E 2chocardiogra$h(-atient Characteri.tic.			
+	0	CO3HA)3S	CO3HA)321	D11102*, DC&, L)mage =i"rar(ME			
6	00	CO3HA)3S	)&A52	3o uro.e of reference			
7	0	CO3HA)3S	)3C=#D2	DH)DDS2=!H2&;2E2cho -rocedure Summar(Section			
*	0	CO3HA)3S	)3C=#D2	DH)D D+202E 2cho Section			VSectionSu"Iect Q 2, DH;32600, S1H, L=eft ,entric'eME V&ea.H($e Q DC)D D12200E

							2chocardiogra$h(=eft , entric'e
6	O	CO3HA)3S	)3C=#D2	DH)D D+202E 2cho Section			VSectionSu"Iect Q 2 , DH;32+00, S1H, L1ight , entric'eME V&ea.H($e Q DC)D D12204E 2chocardiogra$h(1ight , entric'e
10	O	CO3HA)3S	)3C=#D2	DH)D D+202E 2cho Section			VSectionSu"Iect Q 2 , DH;32300, S1H, L=eft AtriumME V&ea.H($e Q DC)D D1220+E 2chocardiogra$h(=eft Atrium
11	O	CO3HA)3S	)3C=#D2	DH)D D+202E 2cho Section			VSectionSu"Iect Q 2 , DH;32200, S1H, L1ight AtriumME V&ea.H($e Q DC)D D12206E 2chocardiogra$h(1ight Atrium
12	O	CO3HA)3S	)3C=#D2	DH)D D+202E 2cho Section			VSectionSu"Iect Q 2 , DH;3+400, S1H, LAortic , a'0eME V&ea.H($e Q DC)D D12211E 2chocardiogra$h(Aortic , a'0e
13	O	CO3HA)3S	)3C=#D2	DH)D D+202E 2cho Section			VSectionSu"Iect Q 2 , DH;3+300, S1H, L&itra' , a'0eME V&ea.H($e Q DC)D D12207E 2chocardiogra$h(&itra' , a'0e
14	O	CO3HA)3S	)3C=#D2	DH)D D+202E 2cho Section			VSectionSu"Iect Q 2 , DH;3+200, S1H, L-u'monic , a'0eME V&ea.H($e Q DC)D D12206E 2chocardiogra$h(

							-u'monic ,a'0e
1+	0	CO3HA)3S	)3C=#D2	DH)D D+202E 2cho Section			VSectionSu"Iect Q 2, DH;3+100, S1H, LHricu.$id ,a'0eME V&ea.H($e Q DC)D D1220*E 2chocardiogra$h(Hricu.$id ,a'0e
16	0	CO3HA)3S	)3C=#D2	DH)D D+202E 2cho Section			VSectionSu"Iect Q 2, DH;42000, S1H, LAortaME V&ea.H($eQ DC)D D12212E 2chocardiogra$h(Aorta
17	0	CO3HA)3S	)3C=#D2	DH)D D+202E 2cho Section			VSectionSu"Iect Q 2, DH;44000, S1H, L-u'monar(arter(ME V&ea.H($e DC)D D12210E Q 2chocardiogra$h(-u'monar(Arter(
1*	0	CO3HA)3S	)3C=#D2	DH)D D+202E 2cho Section			VSectionSu"Iect Q 2, DH;4*600, S1H, L,ena Ca0aME V&ea.H($e Q DC)D D1221+E 2chocardiogra$h(,ena Ca0ae
16	0	CO3HA)3S	)3C=#D2	DH)D D+202E 2cho Section			VSectionSu"Iect Q 2, DH;4*+*1, S1H, L-u'monar(,enou. StructureME V&ea.H($e Q DC)D D12214E 2chocardiogra$h(-u'monar(,ein.
20	0	CO3HA)3S	)3C=#D2	DH)D D+202E 2cho Section			VSectionSu"Iect Q 2, D-+;30031, S1H, LCardiac Shunt Stud(ME V&ea.H($e Q DC)D D12217E

							2chocardiogra$h(Cardiac Shunt
21	O	CO3HA)3S	)3C=#D2	DH)D D+202E 2cho Section			VSectionSu"Iect Q 2, DD4;30000, S1H, LCongenita' Anoma'(of Cardio0a.cu'ar S(.temME V&ea.H($e Q DC)D D1221*E 2chocardiogra$h(Congenita'
22	O	CO3HA)3S	)3C=#D2	DH)D D+204E 8a'' &otion Ana'(.i.			
23	O	CO3HA)3S	)3C=#D2	DH)D D+202E 2cho Section			VSectionSu"Iect Q 2, DD3;60000, S1H, L-ericardia' di.ea.eWE V&ea.H($e Q DC)D D60000E -ericardia' di.ea.e
24	O	CO3HA)3S	)3C=#D2	DH)D D+202E 2cho Section			VSectionSu"Iect Q 2, D5;0364, S1H, LCear rateME V&ea.H($e Q DC)D D12220E 2chocardiogra$h(Common &ea.urement.
2+	O	CO3HA)3S	H2?H	D20121120,&1#S, L.e'f;defined; &ea.urementfi'eME			

9.!. TID3" "4 O0ser.$&ion Con&e<&

$his te2:late s:e+i4ies attri3'tes *4 *3servati*n +*nteJt that 2ay 3e de4ined& eJtended *r re:la+ed at any l*+ati*n in the SR tree%

NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint

2	0	CAS CO3H2?H	O4S	-3A&2	2, L-er.on 3ameME	D12100*,DC&, O".er0er	O$erator from)nfo

4	0	CO3HA)3S	3#&	2, D**67;4, =3, LCeart 1ateME			from)nfo
+	0	CO3HA)3S	3#&	2, D!;00*2C, S1H, LS(.to'ic 4'ood -re..ureME			from)nfo
6	0	CO3HA)3S	3#&	2, D!;00*2D, S1H, WDia.to'ic 4'ood -re..ureWE			from)nfo
7	0	CO3HA)3S	3#&	2,D1*070;3,=3,W1ight Atrium S(.to'ic -re..ureWE			from)nfo
*	0	CO3HA)3S	3#&	2, D*302;2, =3, L-atient CeightME			from Bor9'i.t or)nfo
6	0	CO3HA)3S	3#&	2, D26463;7, =3, L-atient 8 eightME			from Bor9'i.t or)nfo
10	0	CO3HA)3S	3#&	2, D*277;6, =3, L4od(Surface AreaME			from)nfo
11	00	)3!2112D !1O&	COD2	2, D*27*;4, =3, W4od(Surface Area !ormu'aWE		4C)D D3663E 4od(Surface Area 2Auation.	

9.4. TID 3SELFTMP-!4 E'=o Pro'e*)re S),,$r+ Se'&ion

$his is a :rivate te2 :late re4eren+ed 3y $ID>/200?%

	NL	Rel with Parent	VT	Concept Name	Used in Modality	Value Set Constraint	Comment
1			CO3HA)321	DHD12111,DC&,WSummar(WE			
2	0	CO3HA)3S	H2?H	2,D121106,DC&,WCommentWE			from)nfo
3	0	CO3HA)3S	H2?H	D)12101;01,&1#S,W-rimar( )ndication.WE			from)nfo
4	0	CO3HA)3S	H2?H	D)12101;02,&1#S,WSecondar( )ndication.WE			from)nfo
+	0	CO3HA)3S	H2?H	D)12101;03,&1#S,WC-H4 CodeWE			from)nfo
6	0	CO3HA)3S	H2?H	D)12101;04,&1#S,WC-H4 De.cri$tionWE			from)nfo
	0	CO3HA)3S	H2?H	2, D121106, DC&, WCommentWE			from re$ort interface Comment

*	O	CO3HA)3S	H2?H	D)12101;0+,&1#S,W-rom$tWE			from re$ort interface Comment
6	O	CO3HA)3S	H2?H	D121071,DC&,W!inding.WE			from re$ort interface Comment

9.A. TID 3A! !4EC;O SECTION

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Value Set Constraint	Comment
1			CO3HA)321	2, D121070, DC&, M!inding.ME			
2	O	CAS CO3C2-H &OD	COD2	2, D5;C023, S1H, L!inding SiteME		VSectionSu"Iect Q 2, DH;32600, S1H, L=eft, entric'eME	
3	O	CO3HA)3S	CO3HA)321	DH D12+007, DC&, L&ea.urement 5rou$ME			
4	OO	CAS CO3C2-H &OD	COD2	2, D5;0373, S1H,M)mage &odeM E		4C)D D12224E #'tra.ound)mage &ode.	
+	OO	CAS CO3C2-H &OD	COD2	DH D12+203,DC&,MAcAui.ition -rotoco'ME			
6	OO	CO3HA)3S	)3C=#D2	DH)D D+203E 2cho &ea.urement		V&ea.urementQ V&ea.H($e Q DC)D D12200E 2chocardiogra$h(=eft, entric'e V&ethodQC)D D12227E 2chocardiogra$h(&ea.urement &ethod	

9.B. TID 3A! :4 E'=o Me$s)re ,en&

	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Value Set Constraint	Comment
1			)3C=#D2	DH)D D300E &ea.urement		V&ea.urement Q V&ea.urement V&ethod Q V&ethod VHargetSite Q 4C)D D12236E 2cho Anatomic Site. VHargetSite&od Q 4C)D D12237E 2chocardiogra$h(Anatomic Site &odifier.	
2	O	CAS CO3C2-H &OD	COD2	2,D5;C036,S1H,W&ea.urement &ethodWE		Hhi. roB i. u.ed on'(if the mea.urement or ca'cu'ation thi. tem$'ate i. in0o9ed Bith mandate. it. OtherBi.e thi. roB i. not u.ed. Hhe 0a'ue. are ta9en from the 4C)D 12227	
3	O	CAS CO3C2-H &OD	COD2	2, D5;C04*, S1H, L!'oB DirectionME		4C)D D12221E !'oB Direction	
4	O	CAS CO3C2-H &OD	COD2	2, D1;40*66, S1H, L1e.$irator(C(c'e -ointME		DC)D D12234E 1e.$iration State	
+	O	CAS CO3C2-H &OD	COD2	2, D1;40*6A, S1H, LCardiac C(c'e -ointME		DC)D D12233E 1e.$iration State	
6	O	CAS AC: CO3H2?H	COD2	2,D5;0373,S1H,L)mage &odeME		DC)D D12224E #'tra.ound)mage &ode.	

7	0	CAS AC: CO3H2?H	COD2	2, D111031, DC&, L)mage, ieBME		4C)D D12226E 2chocardiogra$h( )mage, ieB	

9.D. CID 3"!! 4E'=o'$r*io%r$8=+ Le-& Ven&ri'(e

)3C=#D2 C)D 12220 2chocardiogra$h(Common &ea.urement.
)3C=#D2 C)D 12201 =eft, entric'e =inear
)3C=#D2 C)D 12240 =eft, entric'e Area
)3C=#D2 C)D 12202 =eft, entric'e, o'ume
)3C=#D2 C)D 12222 Orifice !'oB -ro$ertie.
)3C=#D2 C)D 12203 =eft, entric'e Other
)3C=#D2 C)D 12236 Cardiac Out$ut -ro$ertie.

9.8. CID 3"!! "4 Le-& Ven&ri'(e Line$r

9.#. CID 3"!! !4 Le-& Ven&ri'(e Vo(),e

CSD	CV	Code Meaning
=3	1*026;+	=eft ,entricu'ar 2nd Dia.to'ic ,o'ume
=3	1*14*;7	=eft ,entricu'ar 2nd S(.to'ic ,o'ume
=3	1*043;0	=eft ,entricu'ar 2Iection !raction

9." . CID 3"!! :4 Le-& Ven&ri'(e O&=er

CSD	CV	Code Meaning
=3	1*0*7;7	=eft ,entric'e &a..
=3	1*071;1	=eft ,entricu'ar).o0o'umic 1e'a7ation Hime
S1H	5;0372	=eft ,entricu'ar).o0o'umic Contraction Hime
S1H	5;037!	=eft ,entricu'ar)nde7 of &(ocardia' -erformance
&1#S	&12203;01	=eft ,entric'e -re;2Iection -eriod
&1#S	&12203;02	=eft ,entric'e 2Iection Hime
&1#S	C12203;01	=eft 0entricu'ar &a.. 8 eight)nde7
&1#S	C12203;02	=eft ,entric'e -re;2Iection -eriod to 2Iection Hime 1atio

9."". CID 3"!! 44 E'=o'$r*io%r$8=+ Ri%=& Ven&ri'(e

CSD	CV	Code Meaning
)3C=#D2 C)D 12220 2chocardiogra$h(Common &ea.urement.		
)3C=#D2 C)D 12222 Orifice !'oB -ro$ertie.		
)3C=#D2 C)D 12236 Cardiac Out$ut -ro$ertie.		
=3	20304;2	1ight ,entricu'ar)nterna' Dia.to'ic Dimen.ion
=3	2030+;6	1ight ,entricu'ar)nterna' S(.to'ic Dimen.ion
S1H	5;03*1	1ight ,entricu'ar)nde7 of &(ocardia' -erformance
S1H	5;03*0	1ight ,entricu'ar -ea9 S(.to'ic -re..ure
=3	1*1+3;7	1ight ,entricu'ar Anterior 8a'' Dia.to'ic Hhic9ne..
=3	1*1+7;*	1ight ,entricu'ar Anterior 8a'' S(.to'ic Hhic9ne..
&1#S	&12204;01	1ight 0entricu'ar &aIor
&1#S	&12204;02	1ight 0entricu'ar &inor
&1#S	&12204;03	1ight 0entricu'ar Area at end;dia.to'e
&1#S	&12204;04	1ight 0entricu'ar Area at end;.(.to'e
&1#S	&12204;0+	1ight ,entric'e -re;2Iection -eriod

CSD	CV	Code Meaning
S1H	5;03*6	&itra' ,a'0e AH/DH 1atio
=3	1*040;6	&itra' ,a'0e 2;! S'o$e "(&;&ode
=3	1*036;4	&itra' ,a'0e 2-SS, 2 Ba0e
S1H	5;03*+	&itra' ,a'0e A; 8 a0e Duration
S1H	5;03*7	&itra' ,a'0e C'o.ure to O$ening Hime
=3	1*03+;6	&itra' 1egurgitation d-/dt deri0ed from &itra' 1eg. 0e'ocit(
&1#S	&12207;01	&itra' 0a'0e cu.$ .e$arate di.tance
&1#S	&12207;02	&itra' ,a'0e D;2 S'o$e
&1#S	&12207;03	Am$'itude of the A Ba0e
&1#S	&12207;04	Am$'itude of the 2 Ba0e
&1#S	&12207;0+	Am$'itude from D $oint to 2 $oint
&1#S	&12207;06	&itra' ,a'0e 2;Ba0e -re..ure 5radient
&1#S	&12207;07	&itra' ,a'0e A;Ba0e -re..ure 5radient
&1#S	&12207;0*	2 Ba0e ,e'ocit(Hime)ntegra'
&1#S	&12207;6	A Ba0e ,e'ocit(Hime)ntegra'
&1#S	&12207;10	&itra' ,a'0e 2; 8 a0e Duration
&1#S	&12207;11	S(.to'ic ,e'ocit(of the &itra' Annu'u.Dmedia'E
&1#S	&12207;12	2ar'(dia.to'ic 0e'ocit(of the mitra' annu'u.Dmedia'E
&1#S	&12207;13	=ate dia.to'ic 0e'ocit(of the mitra' annu'u.Dmedia'E
&1#S	&12207;14	2ar'(dia.to'ic 0e'ocit(to =ate dia.to'ic 0e'ocit(1atio
&1#S	&12207;1+	Acce'eration Hime of 2ar'(dia.to'ic 0e'ocit(
&1#S	&12207;16	Acce'eration 1ate of 2ar'(dia.to'ic 0e'ocit(
&1#S	&12207;17	Dece'eration Hime of 2ar'(dia.to'ic 0e'ocit(
&1#S	&12207;1*	Dece'eration 1ate of 2ar'(dia.to'ic 0e'ocit(
&1#S	&12207;16	S(.to'ic ,e'ocit(of the &itra' Annu'u.D'atera'E
&1#S	&12207;20	2ar'(dia.to'ic 0e'ocit(of the mitra' annu'u.D'atera'E
&1#S	&12207;21	=ate dia.to'ic 0e'ocit(of the mitra' annu'u.D'atera'E
&1#S	&12207;22	2ar'(dia.to'ic 0e'ocit(to =ate dia.to'ic 0e'ocit(1atio
&1#S	&12207;23	Acce'eration Hime of 2ar'(dia.to'ic 0e'ocit(
&1#S	&12207;24	Acce'eration 1ate of 2ar'(dia.to'ic 0e'ocit(
&1#S	&12207;2+	Dece'eration Hime of 2ar'(dia.to'ic 0e'ocit(
&1#S	&12207;26	Dece'eration 1ate of 2ar'(dia.to'ic 0e'ocit(
&1#S	&12207;27	&itra' Steno.i. 1adiu.
&1#S	&12207;2*	&itra' Steno.i. A'ia.ing ,e'ocit(
&1#S	&12207;26	&itra' Steno.i. &a7imum ,e'ocit(

CSD	CV	Code Meaning
&1#S	&12207;30	&itra' Steno.i. Area
&1#S	C12207;01	&itra' Steno.i. &a7imum -re..ure 5radient

9."A. CID 3"!! 84 E'=o'$r*io%r$8=+ Tri')s8i* V$(.e

CSD	CV	Code Meaning
)3C=#D2 C)D 12220 2chocardiogra$h(Common &ea.urement.		
)3C=#D2 C)D 12222 Orifice !'oB -ro$ertie.		

9."8. CID 3"!!""4 E'=o'$r*io%r$8=+ Aor&i' V$(.e

CSD	CV	Code Meaning
)3C=#D2 C)D 12220 2chocardiogra$h(Common &ea.urement.		
)3C=#D2 C)D 12222 Orifice !'oB -ro$ertie.		
=3	17666;0	Aortic ,a'0e Cu.$ Se$aration
S1H	5;03*2	1atio of Aortic ,a'0e Acce'eration Hime to 2Iection Hime

9."#. CID 3"!!"!4 E'=o'$r*io%r$8=+ Aor&$

CSD	CV	Code Meaning
)3C=#D2 C)D 12220 2chocardiogra$h(Common &ea.urement.		
=3	1*01+;*	Aortic 1oot Diameter
=3	1*011;7	Aortic Arch Diameter
=3	1*012;+	A.cending Aortic Diameter
=3	1*014;1	Aortic).thmu. Diameter
=3	1*013;3	De.cending Aortic Diameter
&1#S	&12212;01	Aortic Sinotu"u'ar Iunction Diameter
&1#S	&12212;02	Aortic Sinu. Diameter
&1#S	&12212;03	Ductu. Arter(Diameter
&1#S	&12212;04	-re0iou. Ducta' Diameter
&1#S	&12212;0+	=eft Coronar(Arter(Diameter
&1#S	&12212;06	1ight Coronar(Arter(Diameter
&1#S	C12212;02	Aortic Sinotu"u'ar Iunction Diameter/Aorta 1oot Diameter

9.! . CID 3"!!"44 E'=o'$r*io%r$8=+ P)(,on$r+ Veins

CSD	CV	Code Meaning
)3C=#D2 C)D 12220 2chocardiogra$h(Common &ea.urement.		
S1H	5;03*4	-u'monar(,ein A; 8 a0e Duration
S1H	5;03*D	-u'monar(,ein D; 8 a0e ,e'ocit(Hime)ntegra'/
S1H	5;03*C	-u'monar(,ein S; 8 a0e ,e'ocit(Hime)ntegra'
&1#S	&12214;01	-u'monar(,ein S Ba0e f'oB ,e'ocit(
&1#S	&12214;02	-u'monar(,ein D;Ba0e f'oB ,e'ocit(
&1#S	&12214;03	-u'monar(,ein A;Ba0e f'oB ,e'ocit(
&1#S	&12214;04	-u'monar(,ein Dece'eration Hime
&1#S	&12214;0+	-u'monar(,ein 1atio of S; 8 a0e 0e'ocit(to D;Ba0e 0e'ocit(

CSD	CV	Code Meaning
&1#S	&12214;06	-u'monar(,ein S(.to'ic fraction

9.!". CID 3"!!"A4 E'=o'$r*io%r$8=+ Ven$ C$.$e

CSD	CV	Code Meaning
)3C=#D2 C)D 12220 2chocardiogra$h(Common &ea.urement.		
=3	1*006;7	)nferior ,ena Ca0a Diameter
&1#S	&1221+;01	Su$erior ,ena Ca0a Diameter

9.!!. CID 3"!!"D4 E'=o'$r*io%r$8=+ C$r*i$' S=)n&

CSD	CV	Code Meaning
)3C=#D2 C)D 12220 2chocardiogra$h(Common &ea.urement.		
)3C=#D2 C)D 12236 Cardiac Out$ut -ro$ertie.		
=3	26462;6	-u'monar(;to;S(.temic Shunt !'oB 1atio
&1#S	&12217;01	-u'monar(;.u";S(.temic Shunt !'oB Difference

9.!:. CID 3"!!"84 E'=o'$r*io%r$8=+ Con%eni&$(

CSD	CV	Code Meaning

9.!4. CID 3"!!! 4 E'=o'$r*io%r$8=+ Co , ,on Me$s)re ,en&s

CSD	CV	Code Meaning
=3	**67;4	Ceart rate

9.!A. CID 3"!!!"4 F(o/ Dire'&ion

CSD	CV	Code Meaning
S1H	1;42047	Antegrade !'oB
S1H	1;42261	1egurgitant !'oB

9.!B. CID 3"!!!!4 Ori-i'e F(o/ Pro8er&ies

CSD	CV	Code Meaning
S1H	5;03*2	Cardio0a.cu'ar Orifice Area
S1H	5;03*!	Cardio0a.cu'ar Orifice Diameter
S1H	5;0360	1egurgitant !raction
=3	11726;7	-ea9 ,e'ocit(
=3	203+2;1	&ean ,e'ocit(
=3	20247;3	-ea9 5radient
=3	202+6;4	&ean 5radient
=3	203+4;7	,e'ocit(Hime)ntegra'
=3	2016*;1	Acce'eration Hime
=3	116+3;3	2nd Dia.to'ic ,e'ocit(
=3	202*0;4	-re..ure Ca'f;Hime
=3	20217;6	Dece'eration Hime
=3	33*7*;0	,o'ume !'oB
=3	34141;2	-ea9)n.tantaneou. !'oB 1ate
=3	20216;*	Dece'eration S'o$e
&1#S	&12222;0+	A'ia.ing ,e'ocit(
&1#S	&12222;04	Hime
&1#S	&12222;02	Acce'eration S'o$e
&1#S	&12222;06	!'oB 1adiu.

CSD	CV	Code Meaning
&1#S	&12222;01	Ang'e
&1#S	&12222;0*	-re.ure 5radient at end;Dia.to'e
&1#S	&12222;07	Acce'eration Hime/Dece'eration Hime

9.!D. CID 3"!!!44 U(&r$so)n* I ,$%e Mo*es

CSD	CV	Code Meaning
S1H	5;03A2	2D mode
S1H	5;0364	& mode
S1H	1;40622	Do$$'er Co'or !'oB
S1H	5;0364	& mode
S1H	1;40624	Do$$'er -u'.ed
S1H	1;40623	Do$$'er Continuou. 8a0e
DC&	12+230	-oBer Do$$'er
DC&	12+231	3D mode
&1#S	)&12224;01	Hi..ue Do$$'er)maging

9.!8. CID 3"!!!B4 E'=o'$r*io%r$8=+ I ,$%e Vie/

CSD	CV	Code Meaning
S1H	5;A164	A$ica' tBo cham"er
S1H	5;A16C	A$ica' four cham"er
S1H	5;036+	A$ica' 'ong a7i.
S1H	5;0366	-ara.terna' 'ong a7i.
S1H	5;0367	-ara.terna' .hort a7i.
S1H	5;036*	-ara.terna' .hort a7i. at the aortic 0a'0e 'e0e'
S1H	5;0366	-ara.terna' .hort a7i. at the 'e0e' of the mitra' chord.
S1H	5;036A	-ara.terna' .hort a7i. at the &itra' , a'0e 'e0e'
S1H	5;0364	-ara.terna' .hort a7i. at the -a$i''ar(&u.c'e 'e0e'
S1H	5;036C	1ight , entricu'ar)nf'oB Hract , ieB
S1H	5;036D	1ight , entricu'ar Outf'oB Hract , ieB
S1H	5;0362	Su"co.ta' 'ong a7i.
S1H	5;036!	Su"co.ta' .hort a7i.
S1H	5;03A0	Su$ra.terna' 'ong a7i.
S1H	5;03A1	Su$ra.terna' .hort a7i.

9.!#. CID 3"!!!D4 E'=o'$r*io%r$8=+ Me$s)re ,en& Me&=o*

)3C=#D2 C)D 1222* 2chocardiogra$h(,o'ume &ethod.
)3C=#D2 C)D 12226 2chocardiogra$h(Area &ethod.
)3C=#D2 C)D 12231 ,o'ume !'oB &ethod.
)3C=#D2 C)D 12232 &(ocardium &a.. &ethod.

9.: . CID 3"!!!84 Vo() ,e Me&=o*s

CSD	CV	Code Meaning
DC&	12+204	Area;=ength 4i$'ane
DC&	12+20+	Area;=ength Sing'e -'ane
DC&	12+211	4i$'ane 2''i$.e
DC&	12+226	Sing'e -'ane 2''i$.e
DC&	12+206	Cu"e &ethod
DC&	12+207	&ethod of Di.9., 4i$'ane
DC&	12+20*	&ethod of Di.9., Sing'e -'ane
DC&	12+206	Heichho'K
&1#S	,&1222*;01	4u''et
&1#S	,&1222*;02	&ethod of Di.9.,Sim$.on
&1#S	,&1222*;03	5i".on

9.:". CID 3"!!!#4 Are$ Me&=o*s

CSD	CV	Code Meaning
DC&	12+210	Area "(-re..ure Ca'f;Hime
DC&	12+212	Continuit(2Auation
DC&	12+213	Continuit(2Auation "(&ean ,e'ocit(
DC&	12+214	Continuit(2Auation "(-ea9 ,e'ocit(
DC&	12+21+	Continuit(2Auation "(,e'ocit(Hime)ntegra'
DC&	12+216	-ro7ima').o0e'ocit(Surface Area
DC&	12+220	-'animetr(

9.:!. CID 3"!!: 4 Gr$*ien& Me&=o*s

CSD	CV	Code Meaning

CSD	CV	Code Meaning
DC&	12+217	!u'' 4ernou''i
DC&	12+21*	Sim$'ified 4ernou''i

9.::. CID 3"!!:"4 Vo() ,e F(o / Me&=o*s

CSD	CV	Code Meaning
DC&	12+216	Do$$'er ,o'ume !'oB
DC&	12+216	-ro7ima').o0e'ocit(Surface Area

9.:4. CID 3"!!:!4 M+o'$r*i) , M$ss Me&=o*s

CSD	CV	Code Meaning
DC&	12+221	=eft ,entric'e &a.. "(&;mode
DC&	12+222	=eft ,entric'e &a.. "(Hruncated 2''i$.e

9.:A. CID 3"!!::4 C$r*i$' P=$se

CSD	CV	Code Meaning
S1H	!;32020	S(.to'e
S1H	!;32010	Dia.to'e
S1H	!;32011	2nd Dia.to'e
DC&	106070	2nd S(.to'e

9.:B. CID 3"!!:44 Res8ir$&ion P=$se

CSD	CV	Code Meaning
S1H	!;20010	During)n.$iration
S1H	!;20020	During 27$iration

9.:D. CID 3"!!:#4 C$r*i$' O)&8)& Pro8er&ies

CSD	CV	Code Meaning
S1H	!;32120	Stro9e ,o'ume
S1H	!;32100	Cardiac Out$ut
S1H	!;32110	Cardiac)nde7
S1H	!;0007*	Stro9e)nde7
S1H	!;04!D*	1 , Stro9e ,o'ume

CSD	CV	Code Meaning
S1H	!;04!2+	1 , Stro9e)nde7
S1H	!;04!A+	1 , Cardiac Out$ut
S1H	!;04!*4	1 , Cardiac)nde7

9.:8. CID 3"!!4 4 Le-& Ven&ri'(e Are$

CSD	CV	Code Meaning
S1H	5;0374	=eft , entricu'ar S(.to'ic Area
S1H	5;037+	=eft , entricu'ar Dia.to'ic Area
S1H	5;0376	=eft , entric'e 2$icardia' Dia.to'ic Area, $.a7 a 0ieB
&1#S	&12240;01	=eft , entric'e 2ndocardiac Dia.to'ic Area, $.a7 a 0ieB

9.:#. CID 3# 4 Peri'$r*i$(*ise$se

CSD	CV	Code Meaning
&1#S	C60000;01	-ericard 2ffu.ion at end;dia.to'e
&1#S	C60000;02	-ericard 2ffu.ion at end;.(.to'e

9.4 . M$88in% 0e&/een Mo*$(i&+ ,e$s)re ,en&s $n* DICOM Con'e8&s.

9.4 .". Le-& Ven&ri'(e Me$s)re ,en&s

=, OH C1	**67;4,=3,Ceart rate	
=,)DdD2DE	26436;3,=3,=eft , entric'e)nterna' 2nd Dia.to'ic Dimen.ion	)mage&ode Q 5;03A2,S1H,2D mode
=,)Dd Cu"eD2DE	26436;3,=3,=eft , entric'e)nterna' 2nd Dia.to'ic Dimen.ion	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+206,DC&,Cu"e &ethod
=,)Dd HeichD2DE	26436;3,=3,=eft , entric'e)nterna' 2nd Dia.to'ic Dimen.ion	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+206,DC&,Heichho'K
=,)Dd 5i".onD2DE	26436;3,=3,=eft , entric'e)nterna' 2nd Dia.to'ic Dimen.ion	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q, &1222*;03,&1#S,5i".on
=,)Dd 5i".onD&E	26436;3,=3,=eft , entric'e)nterna' 2nd Dia.to'ic Dimen.ion	)mage&ode Q 5;0364,S1H,& &ode &ethod Q, &1222*;03,&1#S,5i".on

=,)Dd Cu"eD&E	26436;3,=3,=eft ,entric'e)nterna' 2nd Dia.to'ic Dimen.ion	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+206,DC&,Cu"e &ethod
=,)Dd HeichD&E	26436;3,=3,=eft ,entric'e)nterna' 2nd Dia.to'ic Dimen.ion	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+206,DC&,Heichho'K
=,)Dd =, &a..DCu"eED2DE	26436;3,=3,=eft ,entric'e)nterna' 2nd Dia.to'ic Dimen.ion	)mage&ode Q 5;03A2,S1H,2D mode
=,)Dd =, &a..DCu"eED&E	26436;3,=3,=eft ,entric'e)nterna' 2nd Dia.to'ic Dimen.ion	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+221,DC&,=eft ,entric'e &a.. "(&;mode
=,)DdD4- 2''i$.eE	26436;3,=3,=eft ,entric'e)nterna' 2nd Dia.to'ic Dimen.ion	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+211,DC&,4i$'ane 2''i$.e
=,)DdD&E	26436;3,=3,=eft ,entric'e)nterna' 2nd Dia.to'ic Dimen.ion	)mage&ode Q 5;0364,S1H,& &ode
=,)D.D2DE	2643*;6,=3,=eft ,entric'e)nterna' S(.to'ic Dimen.ion	)mage&ode Q 5;03A2,S1H,2D mode
=,)D. Cu"eD2DE	2643*;6,=3,=eft ,entric'e)nterna' S(.to'ic Dimen.ion	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+206,DC&,Cu"e &ethod
=,)D. HeichD2DE	2643*;6,=3,=eft ,entric'e)nterna' S(.to'ic Dimen.ion	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+206,DC&,Heichho'K
=,)D. 5i".onD2DE	2643*;6,=3,=eft ,entric'e)nterna' S(.to'ic Dimen.ion	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q, &1222*;03,&1#S,5i".on
=,)D. Cu"eD&E	2643*;6,=3,=eft ,entric'e)nterna' S(.to'ic Dimen.ion	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+206,DC&,Cu"e &ethod
=,)D. HeichD&E	2643*;6,=3,=eft ,entric'e)nterna' S(.to'ic Dimen.ion	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+206,DC&,Heichho'K
=,)D. 5i".onD&E	2643*;6,=3,=eft ,entric'e)nterna' S(.to'ic Dimen.ion	)mage&ode Q 5;0364,S1H,& &ode &ethod Q, &1222*;03,&1#S,5i".on
=,)D.D4- 2''i$.eE	2643*;6,=3,=eft ,entric'e)nterna' S(.to'ic Dimen.ion	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+211,DC&,4i$'ane 2''i$.e
=,)D.D&E	2643*;6,=3,=eft ,entric'e)nterna' S(.to'ic Dimen.ion	)mage&ode Q 5;0364,S1H,& &ode
!SDCu"e;&E	1*0+1;3,=3,=eft ,entricu'ar !ractiona' Shortening	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+206,DC&,Cu"e &ethod
!SDHeich;&E	1*0+1;3,=3,=eft ,entricu'ar !ractiona' Shortening	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+206,DC&,Heichho'K
!SD5i".on;&E	1*0+1;3,=3,=eft ,entricu'ar !ractiona' Shortening	)mage&ode Q 5;0364,S1H,& &ode &ethod Q, &1222*;03,&1#S,5i".on
!SDCu"e;2DE	1*0+1;3,=3,=eft ,entricu'ar !ractiona' Shortening	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+206,DC&,Cu"e &ethod

), S.D&E	1*1+*;6,=3,)nter0entricu'ar Se$tum S(.to'ic Hhic9ne..	)mage&ode Q 5;0364,S1H,& &ode
), S. HeichD2DE	1*1+*;6,=3,)nter0entricu'ar Se$tum S(.to'ic Hhic9ne..	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+206,DC&,Heichho'K
), S. HeichD&E	1*1+*;6,=3,)nter0entricu'ar Se$tum S(.to'ic Hhic9ne..	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+206,DC&,Heichho'K
), S. Cu"eD2DE	1*1+*;6,=3,)nter0entricu'ar Se$tum S(.to'ic Hhic9ne..	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+206,DC&,Cu"e &ethod
), S. Cu"eD&E	1*1+*;6,=3,)nter0entricu'ar Se$tum S(.to'ic Hhic9ne..	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+206,DC&,Cu"e &ethod
), S. 5i".onD2DE	1*1+*;6,=3,)nter0entricu'ar Se$tum S(.to'ic Hhic9ne..	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q , &1222*;03,&1#S,5i".on
), S. 5i".onD&E	1*1+*;6,=3,)nter0entricu'ar Se$tum S(.to'ic Hhic9ne..	)mage&ode Q 5;0364,S1H,& &ode &ethod Q , &1222*;03,&1#S,5i".on
=, - 8]D2DE	1*0+3;6,=3,=eft , entric'e -o.terior 8a''] Hhic9ening	)mage&ode Q 5;03A2,S1H,2D mode
=, - 8]D&E	1*0+3;6,=3,=eft , entric'e -o.terior 8a''] Hhic9ening	)mage&ode Q 5;0364,S1H,& &ode
=, =d a$ica'D&od.Sim$.onE	1*077;*,=3,=eft , entric'e dia.to'ic maIor a7i.	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q , &1222*;02,&1#S,&ethod of Di.9.,Sim$.on
=, =dDA2CE	1*077;*,=3,=eft , entric'e dia.to'ic maIor a7i.	)mage&ode Q 5;03A2,S1H,2D mode)mage , ieB Q 5;A164,S1H,A$ica' tBo cham"er &ethod Q12+20*,DC&,&ethod of Di.9., Sing'e -'ane
=, =dDA4CE	1*077;*,=3,=eft , entric'e dia.to'ic maIor a7i.	)mage&ode Q 5;03A2,S1H,2D mode)mage , ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+20*,DC&,&ethod of Di.9., Sing'e -'ane
=, =d a$ica'DS-2''i$.eE	1*077;*,=3,=eft , entric'e dia.to'ic maIor a7i.	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+226,DC&,Sing'e -'ane 2''i$.e
=, =d a$ica'D4u''etE	1*077;*,=3,=eft , entric'e dia.to'ic maIor a7i.	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q , &1222*;01,&1#S,4u''et
=, =d a$ica'D=, &a.. A;=E	1*077;*,=3,=eft , entric'e dia.to'ic maIor a7i.	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+20+,DC&,Area;=engthSing'e -'ane
=, =d2i	1*077;*,=3,=eft , entric'e dia.to'ic maIor a7i.	)mage&ode Q 5;03A2,S1H,2D mode)mage , ieB Q 5;A164,S1H,A$ica' tBo cham"er &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane

=, =d4i	1*077;*,=3,=eft ,entric'e dia.to'ic maIor a7i.	)mage&ode Q 5;03A2,S1H,2D mode)mage, ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane
=, =. a$ica'D&od.Sim$.onE	1*076;0,=3,=eft ,entric'e .(.to'ic maIor a7i.	)mage&ode Q 5;03A2,S1H,2D mode
=, =.DA2CE	1*076;0,=3,=eft ,entric'e .(.to'ic maIor a7i.	)mage&ode Q 5;03A2,S1H,2D mode)mage, ieB Q 5;A164,S1H,A$ica' tBo cham"er &ethod Q12+226,DC&,Sing'e -'ane 2''i$.e
=, =.DA4CE	1*076;0,=3,=eft ,entric'e .(.to'ic maIor a7i.	)mage&ode Q 5;03A2,S1H,2D mode)mage, ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+226,DC&,Sing'e -'ane 2''i$.e
=, =. a$ica'DS-2''i$.eE	1*076;0,=3,=eft ,entric'e .(.to'ic maIor a7i.	)mage&ode Q 5;03A2,S1H,2D mode
=, =. a$ica'D4u''etE	1*076;0,=3,=eft ,entric'e .(.to'ic maIor a7i.	)mage&ode Q 5;03A2,S1H,2D mode
=, =.2i	1*076;0,=3,=eft ,entric'e .(.to'ic maIor a7i.	)mage&ode Q 5;03A2,S1H,2D mode)mage, ieB Q 5;A164,S1H,A$ica' tBo cham"er &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane
=, =.4i	1*076;0,=3,=eft ,entric'e .(.to'ic maIor a7i.	)mage&ode Q 5;03A2,S1H,2D mode)mage, ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane
=, - 8 .D2DE	1*1+6;0,=3,=eft ,entric'e -o.terior 8a'' S(.to'ic Hhic9ne..	)mage&ode Q 5;03A2,S1H,2D mode
=, - 8 .D&E	1*1+6;0,=3,=eft ,entric'e -o.terior 8a'' S(.to'ic Hhic9ne..	)mage&ode Q 5;0364,S1H,& &ode
=, - 8 . Cu"eD2DE	1*1+6;0,=3,=eft ,entric'e -o.terior 8a'' S(.to'ic Hhic9ne..	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+206,DC&,Cu"e &ethod
=, - 8 . Cu"eD&E	1*1+6;0,=3,=eft ,entric'e -o.terior 8a'' S(.to'ic Hhic9ne..	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+206,DC&,Cu"e &ethod
=, - 8 . HeichD2DE	1*1+6;0,=3,=eft ,entric'e -o.terior 8a'' S(.to'ic Hhic9ne..	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+206,DC&,Heichho'K
=, - 8 . HeichD&E	1*1+6;0,=3,=eft ,entric'e -o.terior 8a'' S(.to'ic Hhic9ne..	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+206,DC&,Heichho'K
=, - 8 . 5i".onD2DE	1*1+6;0,=3,=eft ,entric'e -o.terior 8a'' S(.to'ic Hhic9ne..	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q, &1222*;03,&1#S,5i".on

=,-8.5i".onD&E	1*1+6;0,=3,=eft ,entric'e -o.terior 8a'' S(.to'ic Hhic9ne..	)mage&ode Q 5;0364,S1H,& &ode &ethod Q,&1222*;03,&1#S,5i".on
=,-8dD2DE	1*1+2;6,=3,=eft ,entric'e -o.terior 8a'' Dia.to'ic Hhic9ne..	)mage&ode Q 5;03A2,S1H,2D mode
=,-8dD=, &a..;2DE	1*1+2;6,=3,=eft ,entric'e -o.terior 8a'' Dia.to'ic Hhic9ne..	)mage&ode Q 5;03A2,S1H,2D mode
=,-8dD=, &a..;&E	1*1+2;6,=3,=eft ,entric'e -o.terior 8a'' Dia.to'ic Hhic9ne..	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+221,DC&,=eft ,entric'e &a.. "(&;mode
=,-8dD&E	1*1+2;6,=3,=eft ,entric'e -o.terior 8a'' Dia.to'ic Hhic9ne..	)mage&ode Q 5;0364,S1H,& &ode
=,-8d Cu"eD2DE	1*1+2;6,=3,=eft ,entric'e -o.terior 8a'' Dia.to'ic Hhic9ne..	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+206,DC&,Cu"e &etho06o3.87936(7115.67 149)9.89163(8

= ,)Dd)nde7D&E &12201;0+,&1#S,=eft 0entricu'ar interna'

=, A.DA4CE	5;0374,S1H,=eft , entricu'ar S(.to'ic Area	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+20*,DC&,&ethod of Di.9., Sing'e -'ane
=, A. .a7 &, D4-2''i$.eE	5;0374,S1H,=eft , entricu'ar S(.to'ic Area	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;036A,S1H,-ara.terna' .hort a7i. at the &itra' , a'0e 'e0e' &ethod Q12+211,DC&,4i$'ane 2''i$.e
=, A. .a7 &, D4u''etE	5;0374,S1H,=eft , entricu'ar S(.to'ic Area	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;036A,S1H,-ara.terna' .hort a7i. at the &itra' , a'0e 'e0e' &ethod Q, &1222*;01,&1#S,4u''et
=, A. a$ica'D4-2''i$.eE	5;0374,S1H,=eft , entricu'ar S(.to'ic Area	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+211,DC&,4i$'ane 2''i$.e
=, AreaDdE	5;037+,S1H,=eft , entricu'ar Dia.to'ic Area	)mage&ode Q5;03A2,S1H,2D mode
=, Ad a$ica'DS-2''i$.eE	5;037+,S1H,=eft , entricu'ar Dia.to'ic Area	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;036+,S1H,A$ica' 'ong a7i.
=, Ad .a7 &, D&od.Sim$.onE	5;037+,S1H,=eft , entricu'ar Dia.to'ic Area	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;036A,S1H,-ara.terna' .hort a7i. at the &itra' , a'0e 'e0e'
=, Ad .a7 -&	5;037+,S1H,=eft , entricu'ar Dia.to'ic Area	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;0364,S1H,-ara.terna' .hort a7i. at the -a$i''ar(&u.c'e 'e0e'
=, AdDA2CE	5;037+,S1H,=eft , entricu'ar Dia.to'ic Area	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;A164,S1H,A$ica' tBo cham"er &ethod Q12+20*,DC&,&ethod of Di.9., Sing'e -'ane
=, AdDA4CE	5;037+,S1H,=eft , entricu'ar Dia.to'ic Area	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+20*,DC&,&ethod of Di.9., Sing'e -'ane
=, Ad .a7 &, D4-2''i$.eE	5;037+,S1H,=eft , entricu'ar Dia.to'ic Area	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;036A,S1H,-ara.terna' .hort a7i. at the &itra' , a'0e 'e0e' &ethod Q12+211,DC&,4i$'ane 2''i$.e
=, Ad .a7 &, D4u''etE	5;037+,S1H,=eft , entricu'ar Dia.to'ic Area	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;036A,S1H,-ara.terna' .hort a7i. at the &itra' , a'0e 'e0e' &ethod Q, &1222*;01,&1#S,4u''et

=, Ad a$ica'D4-2''i$.eE	5;037+,S1H,=eft ,entricu'ar Dia.to'ic Area	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;036+,S1H,A$ica' 'ong a7i. &ethod Q12+211,DC&,4i$'ane 2''i$.e
=, Ad .a7 2$iD=, &a.. H;2E	5;0376,S1H,=eft ,entric'e 2$icardia' Dia.to'ic Area, $.a7 a 0ieB	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;0364,S1H,-ara.terna' .hort a7i. at the -a$i''ar(&u.c'e 'e0e' &ethod Q12+222,DC&,=eft ,entric'e &a.. "(Hruncated 2''i$.e
=, Ad .a7 2$iD=, &a.. A;=E	5;0376,S1H,=eft ,entric'e 2$icardia' Dia.to'ic Area, $.a7 a 0ieB	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;0364,S1H,-ara.terna' .hort a7i. at the -a$i''ar(&u.c'e 'e0e' &ethod Q12+20+,DC&,Area;=ength Sing'e -'ane
=, Ad .a7 2ndoD=, &a.. H;2E	&12240;01,&1#S,=eft ,entric'e 2ndocardiac Dia.to'ic Area, $.a7 a 0ieB	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;0364,S1H,-ara.terna' .hort a7i. at the -a$i''ar(&u.c'e 'e0e' &ethod Q12+222,DC&,=eft ,entric'e &a.. "(Hruncated 2''i$.e
=, Ad .a7 2ndoD=, &a.. A;=E	&12240;01,&1#S,=eft ,entric'e 2ndocardiac Dia.to'ic Area, $.a7 a 0ieB	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;0364,S1H,-ara.terna' .hort a7i. at the -a$i''ar(&u.c'e 'e0e' &ethod Q12+20+,DC&,Area;=ength Sing'e -'ane
2D, DS-2''i$.eE	1*026;+,=3,=eft ,entricu'ar 2nd Dia.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+226,DC&,Sing'e -'ane 2''i$.e
2D, D4-2''i$.eE	1*026;+,=3,=eft ,entricu'ar 2nd Dia.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+211,DC&,4i$'ane 2''i$.e
2D, D4u''etE	1*026;+,=3,=eft ,entricu'ar 2nd Dia.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode &ethod Q, &1222*;01,&1#S,4u''et
2D, D&od.Sim$.onE	1*026;+,=3,=eft ,entricu'ar 2nd Dia.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode &ethod Q, &1222*;02,&1#S,&ethod of Di.9.,Sim$.on
2D, DSim$ S-;A2CE	1*026;+,=3,=eft ,entricu'ar 2nd Dia.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;A164,S1H,A$ica' tBo cham"er &ethod Q12+20*,DC&,&ethod of Di.9., Sing'e -'ane
2D, DSim$.on 4-E	1*026;+,=3,=eft ,entricu'ar 2nd Dia.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane
2D, DSim$ 4-;A2CE	1*026;+,=3,=eft ,entricu'ar 2nd Dia.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode)mage, ieB Q 5;A164,S1H,A$ica' tBo cham"er &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane

2D,DSim$ 4-;A4CE	1*026;+,=3,=eft ,entricu'ar 2nd Dia.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode)mage,ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+207,DC&,&ethod of Di.9.,4i$'ane
2D,DCu"e;&E	1*026;+,=3,=eft ,entricu'ar 2nd Dia.to'ic ,o'ume	)mage&ode Q5;0364,S1H,& &ode &ethod Q12+206,DC&,Cu"e &ethod
2D,DHeich;&E	1*026;+,=3,=eft ,entricu'ar 2nd Dia.to'ic ,o'ume	)mage&ode Q5;0364,S1H,& &ode &ethod Q12+206,DC&,Heichho'K
2D,D5i".on;&E	1*026;+,=3,=eft ,entricu'ar 2nd Dia.to'ic ,o'ume	)mage&ode Q5;0364,S1H,& &ode &ethod Q,&1222*;03,&1#S,5i".on
2D,DCu"e;2DE	1*026;+,=3,=eft ,entricu'ar 2nd Dia.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+206,DC&,Cu"e &ethod
2D,DHeich;2DE	1*026;+,=3,=eft ,entricu'ar 2nd Dia.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+206,DC&,Heichho'K
2D,D5i".on;2DE	1*026;+,=3,=eft ,entricu'ar 2nd Dia.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode &ethod Q,&1222*;03,&1#S,5i".on
2D,DSim$ S-;A4CE	1*026;+,=3,=eft ,entricu'ar 2nd Dia.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode)mage,ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+20*,DC&,&ethod of Di.9.,Sing'e -'ane
2S,DS- 2''i$.eE	1*14*;7,=3,=eft ,entricu'ar 2nd S(.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+226,DC&,Sing'e -'ane 2''i$.e

2S ,DSim$ 4-;A4CE	1*14*;7,=3,=eft ,entricu'ar 2nd S(.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode)mage ,ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane
2S ,DCu"e;&E	1*14*;7,=3,=eft ,entricu'ar 2nd S(.to'ic ,o'ume	)mage&ode Q5;0364,S1H,& &ode &ethod Q12+206,DC&,Cu"e &ethod
2S ,DHeich;&E	1*14*;7,=3,=eft ,entricu'ar 2nd S(.to'ic ,o'ume	)mage&ode Q5;0364,S1H,& &ode &ethod Q12+206,DC&,Heichho'K
2S ,D5i".on;&E	1*14*;7,=3,=eft ,entricu'ar 2nd S(.to'ic ,o'ume	)mage&ode Q5;0364,S1H,& &ode &ethod Q , &1222*;03,&1#S,5i".on
2S ,DCu"e;2DE	1*14*;7,=3,=eft ,entricu'ar 2nd S(.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+206,DC&,Cu"e &ethod
2S ,DHeich;2DE	1*14*;7,=3,=eft ,entricu'ar 2nd S(.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+206,DC&,Heichho'K
2S ,D5i".on;2DE	1*14*;7,=3,=eft ,entricu'ar 2nd S(.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode &ethod Q , &1222*;03,&1#S,5i".on
2S ,DSim$ S-;A4CE	1*14*;7,=3,=eft ,entricu'ar 2nd S(.to'ic ,o'ume	)mage&ode Q5;03A2,S1H,2D mode)mage ,ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+20*,DC&,&ethod of Di.9., Sing'e -'ane
2!DS- 2''i$.eE	1*043;0,=3,=eft ,entricu'ar 2lection !raction	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+226,DC&,Sing'e -'ane 2''i$.e
2!D4- 2''i$.eE	1*043;0,=3,=eft ,entricu'ar 2lection !raction	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+211,DC&,4i$'ane 2''i$.e
2!D4u''etE	1*043;0,=3,=eft ,entricu'ar 2lection !raction	)mage&ode Q5;03A2,S1H,2D mode &ethod Q , &1222*;01,&1#S,4u''et
2!D&od.Sim$.onE	1*043;0,=3,=eft ,entricu'ar 2lection !raction	)mage&ode Q5;03A2,S1H,2D mode &ethod Q , &1222*;02,&1#S,&ethod of Di.9.,Sim$.on
2!DA2CE	1*043;0,=3,=eft ,entricu'ar 2lection !raction	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+20*,DC&,&ethod of Di.9., Sing'e -'ane
2!DSim$.on 4-E	1*043;0,=3,=eft ,entricu'ar 2lection !raction	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane
2!2DSim$.on 4-E	1*043;0,=3,=eft ,entricu'ar 2lection !raction	)mage&ode Q5;03A2,S1H,2D mode)mage ,ieB Q 5;A164,S1H,A$ica' tBo cham"er &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane

2!4DSim$.on 4-E	1*043;0,=3,=eft ,entricu'ar 2lection !raction	)mage&ode Q5;03A2,S1H,2D mode)mage , ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane
2!DCu"e;&E	1*043;0,=3,=eft ,entricu'ar 2lection !raction	)mage&ode Q5;0364,S1H,& &ode &ethod Q12+206,DC&,Cu"e &ethod
2!DHeich;&E	1*043;0,=3,=eft ,entricu'ar 2lection !raction	)mage&ode Q5;0364,S1H,& &ode &ethod Q12+206,DC&,Heichho'K
2!D5i".on;&E	1*043;0,=3,=eft ,entricu'ar 2lection !raction	)mage&ode Q5;0364,S1H,& &ode &ethod Q , &1222*;03,&1#S,5i".on
2!DCu"e;2DE	1*043;0,=3,=eft ,entricu'ar 2lection !raction	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+206,DC&,Cu"e &ethod
2!DHeich;2DE	1*043;0,=3,=eft ,entricu'ar 2lection !raction	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+206,DC&,Heichho'K
2!D5i".on;2DE	1*043;0,=3,=eft ,entricu'ar 2lection !raction	)mage&ode Q5;03A2,S1H,2D mode &ethod Q , &1222*;03,&1#S,5i".on
2!DA4CE	1*043;0,=3,=eft ,entricu'ar 2lection !raction	)mage&ode Q5;03A2,S1H,2D mode)mage , ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+20*,DC&,&ethod of Di.9., Sing'e -'ane
=, OH Area	5;03*2,S1H,Cardio0a.cu'ar Orifice Area	)mage&ode Q5;03A2,S1H,2D mode
=, OH DiamD2DE	5;03*!,S1H,Cardio0a.cu'ar Orifice Diameter	)mage&ode Q5;03A2,S1H,2D mode
=, OH DiamD&E	5;03*!,S1H,Cardio0a.cu'ar Orifice Diameter	)mage&ode Q5;0364,S1H,& &ode
=, OH DiamD&, A, H)E	5;03*!,S1H,Cardio0a.cu'ar Orifice Diameter	)mage&ode Q5;03A2,S1H,2D mode
=, OH DiamDA, A, H)E	5;03*!,S1H,Cardio0a.cu'ar Orifice Diameter	)mage&ode Q5;03A2,S1H,2D mode
=, OH DiamDA, A, ma7E	5;03*!,S1H,Cardio0a.cu'ar Orifice Diameter	)mage&ode Q5;03A2,S1H,2D mode
=, OH , ma7	11726;7,=3,-ea9 , e'ocit(	
=, OH , ma7D=, OH, H)E	11726;7,=3,-ea9 , e'ocit(	
=, OH , mean	203+2;1,=3,&ean , e'ocit(	
=, OH - 5ma7	20247;3,=3,-ea9 5radient	
=, OH - 5ma7D=, OH , H)E	20247;3,=3,-ea9 5radient	
=, OH - 5mean	202+6;4,=3,&ean 5radient	

=, OH ,H)	203+4;7,=3,, e'ocit(Hime)ntegra'	
=, OH ,H)D& , A ,H)E	203+4;7,=3,, e'ocit(Hime)ntegra'	
=, OH ,H)DA , A ,H)E	203+4;7,=3,, e'ocit(Hime)ntegra'	
=, OH AccH	2016*;1,=3,Acce'eration Hime	
=, OH	&12222;01,&1#S, Ang'e	
=, OH Acc S'o$e	&12222;02,&1#S, Acce'eration S'o$e	
=, &a..DCu"e;&E	1*0*7;7,=3,=eft ,entric'e &a..	)mage&ode Q5;0364,S1H,& &ode &ethod Q12+221,DC&,=eft ,entric'e &a.. "(&;mode
=, &a..DH;2E	1*0*7;7,=3,=eft ,entric'e &a..	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+222,DC&,=eft ,entric'e &a.. "(Hruncated 2''i$.e
=, &a..DA;=E	1*0*7;7,=3,=eft ,entric'e &a..	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+20+,DC&,Area;=ength Sing'e -'ane
=, &a..DCu"e;2DE	1*0*7;7,=3,=eft ,entric'e &a..	)mage&ode Q5;03A2,S1H,2D mode
),1H	1*071;1,=3,=eft ,entricu'ar).o0o'umic 1e'a7ation Hime	
),CH	5;0372,S1H,=eft ,entricu'ar).o0o'umic Contraction Hime	
=,)&-D&E	5;037!,S1H,=eft ,entricu'ar)nde7 of &(ocardia' -erformance	)mage&ode Q5;0364,S1H,& &ode
=,)&-DDo$$'erE	5;037!,S1H,=eft ,entricu'ar)nde7 of &(ocardia' -erformance	
=,-2-D&E	&12203;01,&1#S,=eft ,entric'e -re;2Iection -eriod	)mage&ode Q5;0364,S1H,& &ode
=,-2-DDo$$'erE	&12203;01,&1#S,=eft ,entric'e -re;2Iection -eriod	
=,2HD&E	&12203;02,&1#S,=eft ,entric'e 2Iection Hime	)mage&ode Q5;0364,S1H,& &ode
=,2HDDo$$'erE	&12203;02,&1#S,=eft ,entric'e 2Iection Hime	
=,2H =,)&-D&E	&12203;02,&1#S,=eft ,entric'e 2Iection Hime	)mage&ode Q5;0364,S1H,& &ode
=,2H =,)&-DDo$$'erE	&12203;02,&1#S,=eft ,entric'e 2Iection Hime	

=, &a..;)DCu"e;&E	C12203;01,&1#S,=eft 0entricu'ar &a.. 8 eight)nde7	)mage&ode Q5;0364,S1H,& &ode &ethod Q12+221,DC&,=eft ,entric'e &a.. "(&;mode
=, &a..;)DH;2E	C12203;01,&1#S,=eft 0entricu'ar &a.. 8 eight)nde7	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+222,DC&,=eft ,entric'e &a.. "(Hruncated 2''i$.e
=, &a..;)DA;=E	C12203;01,&1#S,=eft 0entricu'ar &a.. 8 eight)nde7	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+20+,DC&,Area;=ength Sing'e -'ane
=, &a..;)DCu"e;2DE	C12203;01,&1#S,=eft 0entricu'ar &a.. 8 eight)nde7	)mage&ode Q5;03A2,S1H,2D mode
=, -2-/2HD&E	C12203;02,&1#S,=eft ,entric'e -re;2Iection -eriod to 2Iection Hime 1atio	)mage&ode Q5;0364,S1H,& &ode
=, -2-/2HDDo$$'erE	C12203;02,&1#S,=eft ,entric'e -re;2Iection -eriod to 2Iection Hime 1atio	
=, OH S,	!;32120,S1H,Stro9e ,o'ume	
S,DS- 2''i$.eE	!;32120,S1H,Stro9e ,o'ume	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+226,DC&,Sing'e -'ane 2''i$.e
S,D4- 2''i$.eE	!;32120,S1H,Stro9e ,o'ume	)mage&ode Q5;03A2,S1H,2D mode &ethod Q12+211,DC&,4i$'ane 2''i$.e
S,D4u''etE	!;32120,S1H,Stro9e ,o'ume	)mage&ode Q5;03A2,S1H,2D mode &ethod Q,&1222*;01,&1#S,4u''et
S,D&od.Sim$.onE	!;32120,S1H,Stro9e ,o'ume	)mage&ode Q5;03A2,S1H,2D mode &ethod Q,&1222*;02,&1#S,&ethod of Di.9.,Sim$.on
S,DA2CE	!;32120,S1H,Stro9e ,o'ume	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+20*,DC&,&ethod of Di.9., Sing'e -'ane
S,DSim$.on 4-E	!;32120,S1H,Stro9e ,o'ume	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane
S,2DSim$.on 4-E	!;32120,S1H,Stro9e ,o'ume	)mage&ode Q 5;03A2,S1H,2D mode)mage,ieB Q 5;A164,S1H,A$ica' tBo cham"er &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane
S,4DSim$.on 4-E	!;32120,S1H,Stro9e ,o'ume	)mage&ode Q 5;03A2,S1H,2D mode)mage,ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane

S , DCu"e;&E	!;32120,S1H,Stro9e , o'ume	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+206,DC&,Cu"e &ethod
S , DHeich;&E	!;32120,S1H,Stro9e , o'ume	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+206,DC&,Heichho'K
S , D5i".on;&E	!;32120,S1H,Stro9e , o'ume	)mage&ode Q 5;0364,S1H,& &ode &ethod Q , &1222*;03,&1#S,5i".on
S , DCu"e;2DE	!;32120,S1H,Stro9e , o'ume	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+206,DC&,Cu"e &ethod
S , DHeich;2DE	!;32120,S1H,Stro9e , o'ume	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+206,DC&,Heichho'K
S , D5i".on;2DE	!;32120,S1H,Stro9e , o'ume	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q , &1222*;03,&1#S,5i".on
S , DA4CE	!;32120,S1H,Stro9e , o'ume	)mage&ode Q 5;03A2,S1H,2D mode)mage , ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+20*,DC&,&ethod of Di.9., Sing'e -'ane
= , OH CO	!;32100,S1H,Cardiac Out$ut	
CODS- 2''i$.eE	!;32100,S1H,Cardiac Out$ut	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+226,DC&,Sing'e -'ane 2''i$.e
COD4- 2''i$.eE	!;32100,S1H,Cardiac Out$ut	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+211,DC&,4i$'ane 2''i$.e
COD4u''etE	!;32100,S1H,Cardiac Out$ut	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q , &1222*;01,&1#S,4u''et
COD&od.Sim$.onE	!;32100,S1H,Cardiac Out$ut	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q , &1222*;02,&1#S,&ethod of Di.9.,Sim$.on
CODA2CE	!;32100,S1H,Cardiac Out$ut	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+20*,DC&,&ethod of Di.9., Sing'e -'ane
CODSim$.on 4-E	!;32100,S1H,Cardiac Out$ut	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane
CO2DSim$.on 4-E	!;32100,S1H,Cardiac Out$ut	)mage&ode Q 5;03A2,S1H,2D mode)mage , ieB Q 5;A164,S1H,A$ica' tBo cham"er &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane
CO4DSim$.on 4-E	!;32100,S1H,Cardiac Out$ut	)mage&ode Q 5;03A2,S1H,2D mode)mage , ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane

CO□Cu"e;&E	!;32100,S1H,Cardiac Out$ut	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+206,DC&,Cu"e &ethod
CO□Heich;&E	!;32100,S1H,Cardiac Out$ut	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+206,DC&,Heichho'K
CO□5i".on;&E	!;32100,S1H,Cardiac Out$ut	)mage&ode Q 5;0364,S1H,& &ode &ethod Q , &1222*;03,&1#S,5i".on
CO□Cu"e;2DE	!;32100,S1H,Cardiac Out$ut	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+206,DC&,Cu"e &ethod
CO□Heich;2DE	!;32100,S1H,Cardiac Out$ut	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+206,DC&,Heichho'K
CO□5i".on;2DE	!;32100,S1H,Cardiac Out$ut	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q , &1222*;03,&1#S,5i".on
CO□A4CE	!;32100,S1H,Cardiac Out$ut	)mage&ode Q 5;03A2,S1H,2D mode)mage , ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+20*,DC&,&ethod of Di.9., Sing'e -'ane
= , OH C)	!;32110,S1H,Cardiac)nde7	
C)□S- 2''i$.eE	!;32110,S1H,Cardiac)nde7	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+226,DC&,Sing'e -'ane 2''i$.e
C)□4- 2''i$.eE	!;32110,S1H,Cardiac)nde7	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+211,DC&,4i$'ane 2''i$.e
C)□4u''etE	!;32110,S1H,Cardiac)nde7	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q , &1222*;01,&1#S,4u''et
C)□&od.Sim$.onE	!;32110,S1H,Cardiac)nde7	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q , &1222*;02,&1#S,&ethod of Di.9.,Sim$.on
C)□A2CE	!;32110,S1H,Cardiac)nde7	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+20*,DC&,&ethod of Di.9., Sing'e -'ane
C)□Sim$.on 4-E	!;32110,S1H,Cardiac)nde7	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane
C)2□Sim$.on 4-E	!;32110,S1H,Cardiac)nde7	)mage&ode Q 5;03A2,S1H,2D mode)mage , ieB Q 5;A164,S1H,A$ica' tBo cham"er &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane
C)4□Sim$.on 4-E	!;32110,S1H,Cardiac)nde7	)mage&ode Q 5;03A2,S1H,2D mode)mage , ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+207,DC&,&ethod of Di.9., 4i$'ane

S)DCu"e;&E	!;0007*,S1H,Stro9e)nde7	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+206,DC&,Cu"e &ethod
S)DHeich;&E	!;0007*,S1H,Stro9e)nde7	)mage&ode Q 5;0364,S1H,& &ode &ethod Q12+206,DC&,Heichho'K
S)D5i".on;&E	!;0007*,S1H,Stro9e)nde7	)mage&ode Q 5;0364,S1H,& &ode &ethod Q , &1222*;03,&1#S,5i".on
S)DCu"e;2DE	!;0007*,S1H,Stro9e)nde7	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+206,DC&,Cu"e &ethod
S)DHeich;2DE	!;0007*,S1H,Stro9e)nde7	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+206,DC&,Heichho'K
S)D5i".on;2DE	!;0007*,S1H,Stro9e)nde7	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q , &1222*;03,&1#S,5i".on
S)DA4CE	!;0007*,S1H,Stro9e)nde7	5;03A2,S1H,2D mode)mage , ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q12+20*,DC&,&ethod of Di.9., Sing'e -'ane

9.4 .!. Ri%=& Ven&ri'(e Me$s)re , en&s

1 , DdD2DE	20304;2,=3,1ight , entricu'ar)nterna' Dia.to'ic Dimen.ion	)mage&ode Q 5;03A2,S1H,2D mode
1 , DdD&E	20304;2,=3,1ight , entricu'ar)nterna' Dia.to'ic Dimen.ion	)mage&ode Q 5;0364,S1H,& &ode
1 , D.D2DE	2030+;6,=3,1ight , entricu'ar)nterna' S(.to'ic Dimen.ion	)mage&ode Q 5;03A2,S1H,2D mode
1 , D.D&E	2030+;6,=3,1ight , entricu'ar)nterna' S(.to'ic Dimen.ion	)mage&ode Q 5;0364,S1H,& &ode
1 ,)&-	5;03*1,S1H,1ight , entricu'ar)nde7 of &(ocardia' -erformance	
1 , S-	5;03*0,S1H,1ight , entricu'ar -ea9 S(.to'ic -re..ure	
1 , A 8 dD2DE	1*1+3;7,=3,1ight , entricu'ar Anterior 8a'' Dia.to'ic Hhic9ne..	)mage&ode Q 5;03A2,S1H,2D mode
1 , A 8 dD&E	1*1+3;7,=3,1ight , entricu'ar Anterior 8a'' Dia.to'ic Hhic9ne..	)mage&ode Q 5;0364,S1H,& &ode
1 , A 8 .D2DE	1*1+7;*,=3,1ight , entricu'ar Anterior 8a'' S(.to'ic Hhic9ne..	)mage&ode Q 5;03A2,S1H,2D mode
1 , A 8 .D&E	1*1+7;*,=3,1ight , entricu'ar Anterior 8a'' S(.to'ic Hhic9ne..	)mage&ode Q 5;0364,S1H,& &ode
1 , &alor	&12204;01,&1#S,1ight 0entricu'ar &alor	)mage&ode Q 5;03A2,S1H,2D mode

1, &inor	&12204;02,&1#S,1ight 0entricu'ar &inor	)mage&ode Q 5;03A2,S1H,2D mode
1, AreaDdE	&12204;03,&1#S,1ight 0entricu'ar Area at end;dia.to'e	)mage&ode Q 5;03A2,S1H,2D mode
1, AreaD.E	&12204;04,&1#S,1ight 0entricu'ar Area at end;.(.to'e	)mage&ode Q 5;03A2,S1H,2D mode
1,-2-D&E	&12204;0+,&1#S,1ight ,entric'e -re;2Iection -eriod	)mage&ode Q 5;0364,S1H,& &ode
1,-2-DDo$$'erE	&12204;0+,&1#S,1ight ,entric'e -re;2Iection -eriod	
1,2HD&E	&12204;06,&1#S,1ight ,entric'e 2Iection Hime	)mage&ode Q 5;0364,S1H,& &ode
1,2HD1,)&-E	&12204;06,&1#S,1ight ,entric'e 2Iection Hime	
1,2HDDo$$'erE	&12204;06,&1#S,1ight ,entric'e 2Iection Hime	
1,-2-/2HD&E	C12204;01,&1#S,1ight ,entric'e -re;2Iection -eriod to 2Iection Hime 1atio	)mage&ode Q 5;0364,S1H,& &ode
1,-2-/2HDDo$$'erE	C12204;01,&1#S,1ight ,entric'e -re;2Iection -eriod to 2Iection Hime 1atio	
1,OH C1	**67;4,=3,Ceart rate	
1,OH DiamD2DE	5;03*!,S1H,Cardio0a.cu'ar Orifice Diameter	)mage&ode Q 5;03A2,S1H,2D mode
1,OH DiamD&E	5;03*!,S1H,Cardio0a.cu'ar Orifice Diameter	)mage&ode Q 5;0364,S1H,& &ode
1,OH ,ma7	11726;7,=3,-ea9 ,e'ocit(	
1,OH ,ma7D1,OH ,H)E	11726;7,=3,-ea9 ,e'ocit(	
1,OH ,mean	203+2;1,=3,&ean ,e'ocit(	
1,OH -5ma7	20247;3,=3,-ea9 5radient	
1,OH -5ma7D1,OH ,H)E	20247;3,=3,-ea9 5radient	
1,OH -5mean	202+6;4,=3,&ean 5radient	
1,OH ,H)	203+4;7,=3,,e'ocit(Hime)ntegra'	
1,OH	&12222;01,&1#S,Ang'e	

9.4 .:. Le-& A&ri), Me$s)re,en&s

=A DiamD2DE	26466;4,=3,=eft Atrium Antero;$o.terior S(.to'ic Dimen.ion	)mage&ode Q 5;03A2,S1H,2D mode
=A DiamD&E	26466;4,=3,=eft Atrium Antero;$o.terior S(.to'ic Dimen.ion	)mage&ode Q 5;0364,S1H,& &ode

=A DiamD=A ,o' A;=E	26466;4,=3,=eft Atrium Antero;$o.terior S(.to'ic Dimen.ion	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q 12+20+,DC&,Area;=ength Sing'e -'ane
=A DiamD=A/Ao;2DE	26466;4,=3,=eft Atrium Antero;$o.terior S(.to'ic Dimen.ion	)mage&ode Q 5;03A2,S1H,2D mode
=A DiamD=A/Ao;&E	26466;4,=3,=eft Atrium Antero;$o.terior S(.to'ic Dimen.ion	)mage&ode Q 5;0364,S1H,& &ode
=A/AoD2DE	176*+;3,=3,=eft Atrium to Aortic 1oot 1atio	)mage&ode Q 5;03A2,S1H,2D mode
=A/AoD&E	176*+;3,=3,=eft Atrium to Aortic 1oot 1atio	)mage&ode Q 5;0364,S1H,& &ode
=A Area	17677;0,=3,=eft Atrium S(.to'ic Area	)mage&ode Q 5;03A2,S1H,2D mode
=AADA2CE	17677;0,=3,=eft Atrium S(.to'ic Area	)mage&ode Q 5;03A2,S1H,2D mode)mage ,ieB Q 5;A164,S1H,A$ica' tBo cham"er &ethod Q 12+20+,DC&,Area;=ength Sing'e -'ane
=AADA4CE	17677;0,=3,=eft Atrium S(.to'ic Area	)mage&ode Q 5;03A2,S1H,2D mode)mage ,ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q 12+20+,DC&,Area;=ength Sing'e -'ane
=A ,o'DA;=E	5;03*3,S1H,=eft Atrium S(.to'ic ,o'ume	)mage&ode Q 5;03A2,S1H,2D mode &ethod Q 12+20+,DC&,Area;=ength Sing'e -'ane
=A ,o'DA2CE	5;03*3,S1H,=eft Atrium S(.to'ic ,o'ume	)mage&ode Q 5;03A2,S1H,2D mode)mage ,ieB Q 5;A164,S1H,A$ica' tBo cham"er &ethod Q 12+20*,DC&,&ethod of Di.9., Sing'e -'ane
=A ,o'DA4CE	5;03*3,S1H,=eft Atrium S(.to'ic ,o'ume	)mage&ode Q 5;03A2,S1H,2D mode)mage ,ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q 12+20*,DC&,&ethod of Di.9., Sing'e -'ane
=A &aIor	&1220+;01,&1#S,=eft atrium &aIor	)mage&ode Q 5;03A2,S1H,2D mode
=A &inor	&1220+;02,&1#S,=eft atrium &inor	)mage&ode Q 5;03A2,S1H,2D mode
=eftA.A1/=A.&	C1220+;01,&1#S,Aortic 1oot to =eft Atrium 1atio	

9.4 .4. Ri%=& A&ri) , Me$s)re ,en&s

1A-	1*070;3,=3,1ight Atrium S(.to'ic -re..ure	
1A Area	176**;7,=3,1ight Atrium S(.to'ic Area	)mage&ode Q 5;03A2,S1H,2D mode
1A &aIor	&12206;01,&1#S,1ight atrium &aIor	)mage&ode Q 5;03A2,S1H,2D mode
1A &inor	&12206;02,&1#S,1ight atrium &inor	)mage&ode Q 5;03A2,S1H,2D mode
1A ,o'DA4CE	&12206;03,&1#S,1ight atrium ,o'ume	)mage&ode Q 5;03A2,S1H,2D mode)mage,ieB Q 5;A16C,S1H,A$ica' four cham"er &ethod Q 12+20*,DC&,&ethod of Di.9., Sing'e -'ane

9.4 .A. Aor&i' V$(.e Me$s)re,en&s

ACSD2DE	17666;0,=3,Aortic ,a'0e Cu.$ Se$aration	)mage&ode Q 5;03A2,S1H,2D mode
ACSD&E	17666;0,=3,Aortic ,a'0e Cu.$ Se$aration	)mage&ode Q 5;0364,S1H,& &ode
A, AccH/2H	5;03*2,S1H,1atio of Aortic ,a'0e Acce'eration Hime to 2Iection Hime	
A, C1	**67;4,=3,Ceart rate	
A1 !'oB	33*7*;0,=3,,o'ume !'oB	!'oB Direction Q1;42261,S1H,1egurgitant !'oB &ethod Q12+216,DC&,-ro7ima').o0e'ocit(Surface Area
A1 !'oB 1ate	34141;2,=3,-ea9)n.tantaneou. !'oB 1ate	!'oB Direction Q1;42261,S1H,1egurgitant !'oB)mage&ode Q 1;40622, S1H, Do$$'er Co'or !'oB &ethod Q12+216,DC&,-ro7ima').o0e'ocit(Surface Area
A, A	5;03*2,S1H,Cardio0a.cu'ar Orifice Area	!'oB Direction Q1;42047,S1H,Antegrade !'oB)mage&ode Q 5;03A2,S1H,2D mode &ethod Q12+220,DC&,-'animetr(
A, AD, H)E	5;03*2,S1H,Cardio0a.cu'ar Orifice Area	!'oB Direction Q1;42047,S1H,Antegrade !'oB &ethod Q12+21+,DC&,Continuit(2Auation "(,e'ocit(Hime)ntegra'
A, DiamD2DE	5;03*!,S1H,Cardio0a.cu'ar Orifice Diameter	)mage&ode Q 5;03A2,S1H,2D mode
A, DiamD:$/:.E	5;03*!,S1H,Cardio0a.cu'ar Orifice Diameter	)mage&ode Q 5;03A2,S1H,2D mode
A1 !raction	5;0360,S1H,1egurgitant !raction	!'oB Direction Q1;42261,S1H,1egurgitant !'oB &ethod Q12+216,DC&,-ro7ima').o0e'ocit(Surface Area

A1 ,ed	116+3;3,=3,2nd Dia.to'ic ,e'ocit(	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB
A, ,ma7	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q 1;42047,S1H,Antegrade !'oB
A1 ,ma7	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB
A1 ,ma7DA1 ,H)E	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB
A1 ,ma7DA1 -CHE	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB
A1 ,ma7D-)SA A1E	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB &ethod Q12+216,DC&,-ro7ima').o0e'ocit(Surface Area
A, ,ma7DA, ,H)E	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q 1;42047,S1H,Antegrade !'oB
A, ,mean	203+2;1,=3,&ean ,e'ocit(	!'oB Direction Q 1;42047,S1H,Antegrade !'oB
A1 ,mean	203+2;1,=3,&ean ,e'ocit(	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB
A, -5ma7	20247;3,=3,-ea9 5radient	!'oB Direction Q 1;42047,S1H,Antegrade !'oB
A1 -5ma7	20247;3,=3,-ea9 5radient	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB
A, -5ma7DA, ,H)E	20247;3,=3,-ea9 5radient	!'oB Direction Q 1;42047,S1H,Antegrade !'oB
A1 -5ma7DA1 ,H)E	20247;3,=3,-ea9 5radient	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB
A1 -5ma7DA1 -CHE	20247;3,=3,-ea9 5radient	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB
A, -5mean	202+6;4,=3,&ean 5radient	!'oB Direction Q 1;42047,S1H,Antegrade !'oB
A1 -5mean	202+6;4,=3,&ean 5radient	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB
A, ,H)	203+4;7,=3,,e'ocit(Hime)ntegra'	!'oB Direction Q 1;42047,S1H,Antegrade !'oB
A1 ,H)	203+4;7,=3,,e'ocit(Hime)ntegra'	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB
A, ,H)D:$/:.E	203+4;7,=3,,e'ocit(Hime)ntegra'	!'oB Direction Q 1;42047,S1H,Antegrade !'oB
A1 ,H)D-)SA A1E	203+4;7,=3,,e'ocit(Hime)ntegra'	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB &ethod Q12+216,DC&,-ro7ima').o0e'ocit(Surface Area
A, ,H)DA,A ,H)E	203+4;7,=3,,e'ocit(Hime)ntegra'	!'oB Direction Q 1;42047,S1H,Antegrade !'oB
A1 -CH	202*0;4,=3,-re..ure Ca'f;Hime	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB
A, AccH	2016*;1,=3,Acce'eration Hime	!'oB Direction Q 1;42047,S1H,Antegrade !'oB
A, DecH	20217;6,=3,Dece'eration Hime	!'oB Direction Q 1;42047,S1H,Antegrade !'oB
A1 DcH	20217;6,=3,Dece'eration Hime	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB
A1 DecH	20217;6,=3,Dece'eration Hime	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB

ec S'o$e me A, Dec$Dirtion c

A1 1ad	&12222;06,&1#S,!'oB 1adiu.	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB)mage&ode Q 1;40622, S1H, Do$$'er Co'or !'oB
A1 A'..,e'	&12222;0+,&1#S,A'ia.ing ,e'ocit(	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB)mage&ode Q 1;40622, S1H, Do$$'er Co'or !'oB
A1 Hime	&12222;04,&1#S,Hime	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB
A1 Dc1	&12222;03,&1#S,Dece'eration 1ate	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB
A,	&12222;01,&1#S,Ang'e	!'oB Direction Q 1;42047,S1H,Antegrade !'oB
A1	&12222;01,&1#S,Ang'e	!'oB Direction Q 1;42261,S1H,1egurgitant !'oB
A, S,	!;32120,S1H,Stro9e ,o'ume	
A, CO	!;32100,S1H,Cardiac Out$ut	
A, C)	!;32110,S1H,Cardiac)nde7	
A, S)	!;0007*,S1H,Stro9e)nde7	
-)SA	&12222;06,&1#S, 2ffecti0e 1egurgitant Orifice Area	

9.4 .B. Mi&r$(V$(.e Me$s)re,en&s

&, A ,e'	1767*;* =3 &itra' ,a'0e A; 8a0e -ea9 ,e'ocit(	)mage &ode Q 5;0364,S1H,& &ode
&, A ,e'	1767*;*,=3,&itra' ,a'0e A; 8a0e -ea9 ,e'ocit(	
&, A ,e'D&, A ,H)E	1767*;*,=3,&itra' ,a'0e A; 8a0e -ea9 ,e'ocit(	
&, A ,e'D&, 2/AE	1767*;*,=3,&itra' ,a'0e A; 8a0e -ea9 ,e'ocit(	
&, 2 ,e'	1*037;2,=3,&itra' ,a'0e 2; 8a0e -ea9 ,e'ocit(	
&, 2 ,e'D&, 2 ,H)E	1*037;2,=3,&itra' ,a'0e 2; 8a0e -ea9 ,e'ocit(	
&, 2 ,e'D&, 2/AE	1*037;2,=3,&itra' ,a'0e 2; 8a0e -ea9 ,e'ocit(	
&, 2/A	1*03*;0,=3,&itra' ,a'0e 2 to A 1atio	
&, 2/AD&, 2/AE	1*03*;0,=3,&itra' ,a'0e 2 to A 1atio	

&, C;O durD&E	5;03*7,S1H,&itra', a'0e C'o.ure to O$ening Hime	)mage&ode Q 5;0364,S1H,& &ode
&, C;O durDDo$$'erE	5;03*7,S1H,&itra', a'0e C'o.ure to O$ening Hime	
d-/dt	1*03+;6,=3,&itra' 1egurgitation D$/dt deri0ed from &itra' 1eg. 0e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
&CSD2DE	&12207;01,&1#S,&itra' 0a'0e cu.$ .e$arate di.tance	)mage&ode Q 5;03A2,S1H,2D mode
&CSD&E	&12207;01,&1#S,&itra' 0a'0e cu.$ .e$arate di.tance	)mage&ode Q 5;0364,S1H,& &ode
&, D;2 S'o$e	&12207;02,&1#S,&itra', a'0e D;2 S'o$e	)mage&ode Q 5;0364,S1H,& &ode
&, A Am$	&12207;03,&1#S,Am$'itude of the A Ba0e	)mage&ode Q 5;0364,S1H,& &ode
&, 2 Am$	&12207;04,&1#S,Am$'itude of the 2 Ba0e	)mage&ode Q 5;0364,S1H,& &ode
&, D2	&12207;0+,&1#S,Am$'itude from D -oint to 2 -oint	)mage&ode Q 5;0364,S1H,& &ode
&, 2 -5	&12207;06,&1#S,&itra', a'0e 2;Ba0e -re..ure 5radient	
&, A -5	&12207;07,&1#S,&itra', a'0e A;Ba0e -re..ure 5radient	
&, 2 ,H)	&12207;0*,&1#S,2 Ba0e ,e'ocit(Hime)ntegra'	!'oB Direction Q1;42047,S1H,Antegrade !'oB
&, A ,H)	&12207;06,&1#S,A Ba0e ,e'ocit(Hime)ntegra'	!'oB Direction Q1;42047,S1H,Antegrade !'oB
&, 2 Dur	&12207;10,&1#S,&itra', a'0e 2;8 a0e Duration	
SaDmedia'E	&12207;11,&1#S,S(.to'ic ,e'ocit(of the &itra' Annu'u.Dmedia'E	)mage&ode Q)&12224;01,&1#S,Hi..ue Do$$'er)maging
2aDmedia'E	&12207;12,&1#S,2ar'(dia.to'ic 0e'ocit(of the mitra' annu'u.Dmedia'E	)mage&ode Q)&12224;01,&1#S,Hi..ue Do$$'er)maging
AaDmedia'E	&12207;13,&1#S,=ate dia.to'ic 0e'ocit(of the mitra' annu'u.Dmedia'E	)mage&ode Q)&12224;01,&1#S,Hi..ue Do$$'er)maging
2a/AaDmedia'E	&12207;14,&1#S,2ar'(dia.to'ic 0e'ocit(to =ate dia.to'ic 0e'ocit(1atio	)mage&ode Q)&12224;01,&1#S,Hi..ue Do$$'er)maging
AtaDmedia'E	&12207;1+,&1#S,Acce'eration Hime of 2ar'(dia.to'ic 0e'ocit(	)mage&ode Q)&12224;01,&1#S,Hi..ue Do$$'er)maging
AraDmedia'E	&12207;16,&1#S,Acce'eration 1ate of 2ar'(dia.to'ic 0e'ocit(	)mage&ode Q)&12224;01,&1#S,Hi..ue Do$$'er)maging

Dta□media'E	&12207;17,&1#S,Dece'eration Hime of 2ar'(dia.to'ic 0e'ocit(	)mage&ode Q)&12224;01,&1#S,Hi..ue Do$$'er)maging
Dra□media'E	&12207;1*,&1#S,Dece'eration 1ate of 2ar'(dia.to'ic 0e'ocit(	)mage&ode Q)&12224;01,&1#S,Hi..ue Do$$'er)maging
Sa□'atera'E	&12207;16,&1#S,S(.to'ic ,e'ocit(of the &itra' Annu'u.□'atera'E	)mage&ode Q)&12224;01,&1#S,Hi..ue Do$$'er)maging
2a□'atera'E	&12207;20,&1#S,2ar'(dia.to'ic 0e'ocit(of the mitra' annu'u.□'atera'E	)mage&ode Q)&12224;01,&1#S,Hi..ue Do$$'er)maging
Aa□'atera'E	&12207;21,&1#S,=ate dia.to'ic 0e'ocit(of the mitra' annu'u.□'atera'E	)mage&ode Q)&12224;01,&1#S,Hi..ue Do$$'er)maging
2a/Aa□'atera'E	&12207;22,&1#S,2ar'(dia.to'ic 0e'ocit(to =ate dia.to'ic 0e'ocit(1atio	)mage&ode Q)&12224;01,&1#S,Hi..ue Do$$'er)maging
Ata□'atera'E	&12207;23,&1#S,Acce'eration Hime of 2ar'(dia.to'ic 0e'ocit(	)mage&ode Q)&12224;01,&1#S,Hi..ue Do$$'er)maging
Ara□'atera'E	&12207;24,&1#S,Acce'eration 1ate of 2ar'(dia.to'ic 0e'ocit(	)mage&ode Q)&12224;01,&1#S,Hi..ue Do$$'er)maging
Dta□'atera'E	&12207;2+,&1#S,Dece'eration Hime of 2ar'(dia.to'ic 0e'ocit(	)mage&ode Q)&12224;01,&1#S,Hi..ue Do$$'er)maging
Dra□'atera'E	&12207;26,&1#S,Dece'eration 1ate of 2ar'(dia.to'ic 0e'ocit(	)mage&ode Q)&12224;01,&1#S,Hi..ue Do$$'er)maging
&S 1ad	&12207;27,&1#S,&itra' Steno.i. 1adiu.	)mage&ode Q 1;40622, S1H, Do$$'er Co'or !'oB &ethod Q 12+216,DC&,-ro7ima').o0e'ocit(Surface Area
&S A'.. , e'	&12207;2*,&1#S,&itra' Steno.i. A'ia.ing , e'ocit(	)mage&ode Q 1;40622, S1H, Do$$'er Co'or !'oB &ethod Q 12+216,DC&,-ro7ima').o0e'ocit(Surface Area
&S , ma7	&12207;26,&1#S,&itra' Steno.i. &a7imum , e'ocit(	
&S , ma7□-)SA &SE	&12207;26,&1#S,&itra' Steno.i. &a7imum , e'ocit(	&ethod Q 12+216,DC&,-ro7ima').o0e'ocit(Surface Area

&S Area	&12207;30,&1#S,&itra' Steno.i. Area	&ethod Q 12+216,DC&,-ro7ima').o0e'ocit(Surface Area
&S -gma7	C12207;01,&1#S,&itra' Steno.i. &a7imum -re..ure 5radient	
&, C1	**67;4,=3,Ceart rate	
&1 !'oB	33*7*;0,=3,,o'ume !'oB	!'oB Direction Q1;42261,S1H,1egurgitant !'oB &ethod Q 12+216,DC&,-ro7ima').o0e'ocit(Surface Area
&1 !'oB 1ate	34141;2,=3,-ea9)n.tantaneou. !'oB 1ate	!'oB Direction Q1;42261,S1H,1egurgitant !'oB)mage&ode Q 1;40622, S1H, Do$$'er Co'or !'oB &ethod Q 12+216,DC&,-ro7ima').o0e'ocit(Surface Area
&,A	5;03*2,S1H,Cardio0a.cu'ar Orifice Area	!'oB Direction Q1;42047,S1H,Antegrade !'oB)mage&ode Q 5;03A2,S1H,2D mode &ethod Q 12+220,DC&,-'animetr(
&,AD-CHE	5;03*2,S1H,Cardio0a.cu'ar Orifice Area	!'oB Direction Q1;42047,S1H,Antegrade !'oB &ethod Q 12+210,DC&,Area "(-re..ure Ca'f;Hime
&,AD,H)E	5;03*2,S1H,Cardio0a.cu'ar Orifice Area	!'oB Direction Q1;42047,S1H,Antegrade !'oB &ethod Q 12+21+,DC&,Continuit(2Auation "(,e'ocit(Hime)ntegra'
&, Diam	5;03*!,S1H,Cardio0a.cu'ar Orifice Diameter	!'oB Direction Q1;42047,S1H,Antegrade !'oB)mage&ode Q 5;03A2,S1H,2D mode
&1 !raction	5;0360,S1H,1egurgitant !raction	!'oB Direction Q1;42261,S1H,1egurgitant !'oB &ethod Q 12+216,DC&,-ro7ima').o0e'ocit(Surface Area
&, ,ma7	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42047,S1H, Antegrade !'oB
&1 ,ma7	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB)mage&ode Q 5;03A2,S1H,2D mode

&, ,ma7D&, -CHE	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42047,S1H, Antegrade !'oB
&, ,ma7D&, ,H)E	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42047,S1H, Antegrade !'oB
&1 ,ma7D&1 ,H)E	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
&1 ,ma7D-)SA &1E	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB &ethod Q 12+216,DC&,-ro7ima').o0e'ocit(Surface Area
&, ,mean	203+2;1,=3,&ean ,e'ocit(	!'oB Direction Q1;42047,S1H, Antegrade !'oB
&1 ,mean	203+2;1,=3,&ean ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
&, -gma7	20247;3,=3,-ea9 5radient	!'oB Direction Q1;42047,S1H, Antegrade !'oB
&1 -gma7	20247;3,=3,-ea9 5radient	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
&, -gmean	202+6;4,=3,&ean 5radient	!'oB Direction Q1;42047,S1H, Antegrade !'oB
&1 -gmean	202+6;4,=3,&ean 5radient	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
&, ,H)	203+4;7,=3,,e'ocit(Hime)ntegra'	!'oB Direction Q1;42047,S1H, Antegrade !'oB
&1 ,H)	203+4;7,=3,,e'ocit(Hime)ntegra'	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
&, ,H)D&,A ,H)E	203+4;7,=3,,e'ocit(Hime)ntegra'	!'oB Direction Q1;42047,S1H, Antegrade !'oB
&1 ,H)D-)SA &1E	203+4;7,=3,,e'ocit(Hime)ntegra'	!'oB Direction Q1;42261,S1H,1egurgitant !'oB &ethod Q 12+216,DC&,-ro7ima').o0e'ocit(Surface Area
&, -CH	202*0;4,=3,-re..ure Ca'f;Hime	!'oB Direction Q1;42047,S1H, Antegrade !'oB
&, AccH	2016*;1,=3,Acce'eration Hime	!'oB Direction Q1;42047,S1H, Antegrade !'oB
&, DecH	20217;6,=3,Dece'eration Hime	!'oB Direction Q1;42047,S1H, Antegrade !'oB
&, Dec S'o$e	20216;*,=3,Dece'eration S'o$e	!'oB Direction Q1;42047,S1H, Antegrade !'oB

&, Acc S'o$e	&12222;02,&1#S,Acce'eration S'o$e	!'oB Direction Q1;42047,S1H, Antegrade !'oB
dt	&12222;04,&1#S,Hime	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
&1 1ad	&12222;06,&1#S,!'oB 1adiu.	!'oB Direction Q1;42261,S1H,1egurgitant !'oB)mage&ode Q 1;40622, S1H, Do$$'er Co'or !'oB
&1 A'..,e'	&12222;0+,&1#S,A'ia.ing ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB)mage&ode Q 1;40622, S1H, Do$$'er Co'or !'oB
&,	&12222;01,&1#S,Ang'e	!'oB Direction Q1;42047,S1H,Antegrade !'oB
&1	&12222;01,&1#S,Ang'e	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
&, S,	!;32120,S1H,Stro9e ,o'ume	
&, CO	!;32100,S1H,Cardiac Out$ut	
&, C)	!;32110,S1H,Cardiac)nde7	
&, S)	!;0007*,S1H,Stro9e)nde7	
2/2a	&12207;3+,&1#S,&, 2/2a	
-)SA	&12222;06,&1#S, 2ffecti0e 1egurgitant Orifice Area	

9.4 .D. P)(,oni' V$(.e Me$s)re,en&s

-,\	&12222;01,&1#S,Ang'e	!'oB Direction Q1;42047,S1H,Antegrade !'oB
-1\	&12222;01,&1#S,Ang'e	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-, C1	**67;4,=3,Ceart rate	
-1 !'oB	33*7*;0,=3,,o'ume !'oB	!'oB Direction Q1;42261,S1H,1egurgitant !'oB &ethod Q 12+216,DC&,-ro7ima').o0e'ocit(Surface Area
-1 !'oB 1ate	34141;2,=3,-ea9)n.tantaneou. !'oB 1ate	!'oB Direction Q1;42261,S1H,1egurgitant !'oB)mage&ode Q 1;40622, S1H, Do$$'er Co'or !'oB &ethod Q 12+216,DC&,-ro7ima').o0e'ocit(Surface Area
-, Diam	5;03*!,S1H,Cardio0a.cu'ar Orifice Diameter	!'oB Direction Q1;42047,S1H,Antegrade !'oB)mage&ode Q 5;03A2,S1H,2D mode

-, Diam□:$/:.E	5;03*!,S1H,Cardio0a.cu'ar Orifice Diameter	!'oB Direction Q1;42047,S1H,Antegrade !'oB)mage&ode Q 5;03A2,S1H,2D mode
-1 !raction	5;0360,S1H,1egurgitant !raction	!'oB Direction Q1;42261,S1H,1egurgitant !'oB &ethod Q 12+216,DC&,-ro7ima').o0e'ocit(Surface Area
-1 ,ed	116+3;3,=3,2nd Dia.to'ic ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-1 ,ed□-A2D-E	116+3;3,=3,2nd Dia.to'ic ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-, ,ma7	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42047,S1H, Antegrade !'oB
-1 ,ma7	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-, ,ma7□-, ,H)E	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42047,S1H, Antegrade !'oB
-1 ,ma7□-1 ,H)E	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-1 ,ma7□-1 -CHE	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-1 ,ma7□-)SA -1E	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-, ,mean	203+2;1,=3,&ean ,e'ocit(	!'oB Direction Q1;42047,S1H, Antegrade !'oB
-1 ,mean	203+2;1,=3,&ean ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-, -5ma7	20247;3,=3,-ea9 5radient	!'oB Direction Q1;42047,S1H,Antegrade !'oB
-1 -5ma7	20247;3,=3,-ea9 5radient	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-, -5ma7□-, ,H)E	20247;3,=3,-ea9 5radient	!'oB Direction Q1;42047,S1H, Antegrade !'oB
-1 -5ma7□-1 ,H)E	20247;3,=3,-ea9 5radient	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-1 -5ma7□-1 -CHE	20247;3,=3,-ea9 5radient	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-, -5mean	202+6;4,=3,&ean 5radient	!'oB Direction Q1;42047,S1H,Antegrade !'oB
-1 -5mean	202+6;4,=3,&ean 5radient	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-, ,H)	203+4;7,=3,,e'ocit(Hime)ntegra'	!'oB Direction Q1;42047,S1H,Antegrade !'oB
-1 ,H)	203+4;7,=3,,e'ocit(Hime)ntegra'	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-, ,H)□:$/:.E	203+4;7,=3,,e'ocit(Hime)ntegra'	!'oB Direction Q1;42047,S1H,Antegrade !'oB
-1 ,H)□-)SA -1E	203+4;7,=3,,e'ocit(Hime)ntegra'	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-1 -CH	202*0;4,=3,-re..ure Ca'f;Hime	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-, AccH	2016*;1,=3,Acce'eration Hime	!'oB Direction Q1;42047,S1H,Antegrade !'oB
-1 DecH	20217;6,=3,Dece'eration Hime	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-1 Dec S'o$e	20216;*,=3,Dece'eration S'o$e	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-, Acc S'o$e	&12222;02,&1#S,Acce'eration S'o$e	!'oB Direction Q1;42047,S1H,Antegrade !'oB
-1 1ad	&12222;06,&1#S,!'oB 1adiu.	!'oB Direction Q1;42261,S1H,1egurgitant !'oB)mage&ode Q 1;40622, S1H, Do$$'er Co'or !'oB
-1 A'..,e'	&12222;0+,&1#S,A'ia.ing ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB)mage&ode Q 1;40622, S1H, Do$$'er Co'or !'oB

-1 -5ed	&12222;0*,&1#S,-re.ure 5radient at end;Dia.to'e	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-1 -5edD-A2D-E	&12222;0*,&1#S,-re.ure 5radient at end;Dia.to'e	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
-, S,	!;32120,S1H,Stro9e ,o'ume	
-, CO	!;32100,S1H,Cardiac Out$ut	
-, C)	!;32110,S1H,Cardiac)nde7	
-, S)	!;0007*,S1H,Stro9e)nde7	
-)SA	&12222;06,&1#S, 2ffecti0e 1egurgitant Orifice Area	

9.4 .8. Tri')s8i* V$(.e Me$s)re ,en&s

H, 2 ,e'	1*031;+,=3,Hricu.$id ,a'0e 2 8a0e -ea9 ,e'ocit(	
H, 2 ,e'DH, 2/AE	1*031;+,=3,Hricu.$id ,a'0e 2 8a0e -ea9 ,e'ocit(	
H, A ,e'	1*030;7,=3,Hricu.$id ,a'0e A 8a0e -ea9 ,e'ocit(	
H, A ,e'DH, 2/AE	1*030;7,=3,Hricu.$id ,a'0e A 8a0e -ea9 ,e'ocit(	
H, 2/A	1*036;*,=3,Hricu.$id ,a'0e 2 to A 1atio	
H, 2/ADH, 2/AE	1*036;*,=3,Hricu.$id ,a'0e 2 to A 1atio	
H, C;O dur	5;03*6,S1H,Hricu.$id ,a'0e C'o.ure to O$ening Hime	
H,	&12222;01,&1#S,Ang'e	!'oB Direction Q1;42047,S1H,Antegrade !'oB
H1	&12222;01,&1#S,Ang'e	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
H, C1	**67;4,=3,Ceart rate	
H1 !'oB	33*7*;0,=3,,o'ume !'oB	!'oB Direction Q1;42261,S1H,1egurgitant !'oB &ethod Q 12+216,DC&,-ro7ima').o0e'ocit(Surface Area
H1 !'oB 1ate	34141;2,=3,-ea9)n.tantaneou. !'oB 1ate	!'oB Direction Q1;42261,S1H,1egurgitant !'oB)mage&ode Q 1;40622, S1H, Do$$'er Co'or !'oB &ethod Q 12+216,DC&,-ro7ima').o0e'ocit(Surface Area

H , A	5;03*2,S1H,Cardio0a.cu'ar Orifice Area	!'oB Direction Q1;42047,S1H, Antegrade !'oB)mage&ode Q 5;03A2,S1H,2D mode &ethod Q 12+220,DC&,-'animetr(
H , AD-CHE	5;03*2,S1H,Cardio0a.cu'ar Orifice Area	!'oB Direction Q1;42047,S1H, Antegrade !'oB &ethod Q 12+210,DC&,Area "(-re..ure Ca'f;Hime
H , Diam	5;03*!,S1H,Cardio0a.cu'ar Orifice Diameter	!'oB Direction Q1;42047,S1H, Antegrade !'oB)mage&ode Q 5;03A2,S1H,2D mode
H1 !raction	5;0360,S1H,1egurgitant !raction	!'oB Direction Q1;42261,S1H,1egurgitant !'oB &ethod Q 12+216,DC&,-ro7ima').o0e'ocit(Surface Area
H , ,ma7	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42047,S1H, Antegrade !'oB
H1 ,ma7	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
H , ,ma7DH , -CHE	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42047,S1H, Antegrade !'oB
H , ,ma7DH , ,H)E	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42047,S1H, Antegrade !'oB
H1 ,ma7DH1 ,H)E	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
H1 ,ma7D-)SA H1E	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB &ethod Q 12+216,DC&,-ro7ima').o0e'ocit(Surface Area
H1 ,ma7D1 ,S-E	11726;7,=3,-ea9 ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
H , ,mean	203+2;1,=3,&ean ,e'ocit(	!'oB Direction Q1;42047,S1H, Antegrade !'oB
H1 ,mean	203+2;1,=3,&ean ,e'ocit(	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
H , -5ma7DH , -CHE	20247;3,=3,-ea9 5radient	!'oB Direction Q1;42047,S1H, Antegrade !'oB
H , -5ma7DH , ,H)E	20247;3,=3,-ea9 5radient	!'oB Direction Q1;42047,S1H, Antegrade !'oB
H , -5ma7	20247;3,=3,-ea9 5radient	!'oB Direction Q1;42047,S1H, Antegrade !'oB
H1 -5ma7	20247;3,=3,-ea9 5radient	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
H1 -5ma7DH1 ,H)E	20247;3,=3,-ea9 5radient	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
H1 -5ma7D1 ,S-E	20247;3,=3,-ea9 5radient	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
H , -5mean	202+6;4,=3,&ean 5radient	!'oB Direction Q1;42047,S1H, Antegrade !'oB
H1 -5mean	202+6;4,=3,&ean 5radient	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
H , ,H)	203+4;7,=3,,e'ocit(Hime)ntegra'	!'oB Direction Q1;42047,S1H, Antegrade !'oB
H1 ,H)	203+4;7,=3,,e'ocit(Hime)ntegra'	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
H1 ,H)D-)SA H1E	203+4;7,=3,,e'ocit(Hime)ntegra'	!'oB Direction Q1;42261,S1H,1egurgitant !'oB &ethod Q12+216,DC&,-ro7ima').o0e'ocit(Surface Area
H , -CH	202*0;4,=3,-re..ure Ca'f;Hime	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
H , AccH	2016*;1,=3,Acce'eration Hime	!'oB Direction Q1;42047,S1H, Antegrade !'oB

H , DecH	20217;6,=3,Dece'eration Hime	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
H , Dec S'o$e	20216;*,=3,Dece'eration S'o$e	!'oB Direction Q1;42261,S1H,1egurgitant !'oB
H , A Dur	&1220*;01,&1#S,Hricu.$id , a'0e 2; 8 a0e Duration	!'oB Direction Q1;42047,S1H, Antegrade !'oB
H , 2 - 5	&1220*;02,&1#S,Hricu.$id , a'0e 2 8 a0e -re..ure 5radient	!'oB Direction Q1;42047,S1H, Antegrade !'oB
H , A - 5	&1220*;03,&1#S,Hricu.$id , a'0e A 8 a0e -re..ure 5radient	!'oB Direction Q1;42047,S1H, Antegrade !'oB
H , Acc S'o$e	&12222;02,&1#S,Acce'eration S'o$e	!'oB Direction Q1;42047,S1H, Antegrade !'oB
H , AccH/DecH	&12222;07,&1#S,Acce'eration Hime/Dece'eration Hime	!'oB Direction Q1;42047,S1H, Antegrade !'oB
H1 1ad	&12222;06,&1#S,!'oB 1adiu.	!'oB Direction Q1;42261,S1H,1egurgitant !'oB)mage&ode Q 1;40622, S1H, Do$$'er Co'or !'oB
H1 A'.. , e'	&12222;02,&1#S,A'ia.ing , e'ocit(	)mage&ode Q 1;40622, S1H, Do$$'er Co'or !'oB
H , S ,	!;32120,S1H,Stro9e , o'ume	
H , CO	!;32100,S1H,Cardiac Out$ut	
H , C)	!;32110,S1H,Cardiac)nde7	
H , S)	!;0007*,S1H,Stro9e)nde7	
-)SA	&12222;06,&1#S, 2ffecti0e 1egurgitant Orifice Area	

9.4 .#. Aor&$ Me$s)re , en&s

Ao DiamD2DE	1*01+;*,=3,Aortic 1oot Diameter	)mage&ode Q 5;03A2,S1H,2D mode
Ao DiamD&E	1*01+;*,=3,Aortic 1oot Diameter	)mage&ode Q 5;0364,S1H,& &ode
Ao DiamD=A/Ao;2DE	1*01+;*,=3,Aortic 1oot Diameter	)mage&ode Q 5;03A2,S1H,2D mode
Ao DiamD=A/Ao;&E	1*01+;*,=3,Aortic 1oot Diameter	)mage&ode Q 5;0364,S1H,& &ode
Ao Arch DiamD2DE	1*011;7,=3,Aortic Arch Diameter	)mage&ode Q 5;03A2,S1H,2D mode
Ao Arch DiamD&E	1*011;7,=3,Aortic Arch Diameter	)mage&ode Q 5;0364,S1H,& &ode
Ao A.c DiamD2DE	1*012;+,=3,A.cending Aortic Diameter	)mage&ode Q 5;03A2,S1H,2D mode
Ao A.c DiamD&E	1*012;+,=3,A.cending Aortic Diameter	)mage&ode Q 5;0364,S1H,& &ode
Ao).thmu.D2DE	1*014;1,=3,Aortic).thmu. Diameter	)mage&ode Q 5;03A2,S1H,2D mode
Ao).thmu.D&E	1*014;1,=3,Aortic).thmu. Diameter	)mage&ode Q 5;0364,S1H,& &ode

Ao De.c DiamD2DE	1*013;3,=3,De.cending Aortic Diameter	)mage&ode Q 5;03A2,S1H,2D mode
Ao De.c DiamD&E	1*013;3,=3,De.cending Aortic Diameter	)mage&ode Q 5;0364,S1H,& &ode
Ao .t IunctD2DE	&12212;01,&1#S,Aortic Sinotu"u'ar Iunction Diameter	)mage&ode Q 5;03A2,S1H,2D mode
Ao .t IunctD&E	&12212;01,&1#S,Aortic Sinotu"u'ar Iunction Diameter	)mage&ode Q 5;0364,S1H,& &ode
Ao Sinu. DiamD2DE	&12212;02,&1#S,Aortic Sinu. Diameter	)mage&ode Q 5;03A2,S1H,2D mode
Ao Sinu. DiamD&E	&12212;02,&1#S,Aortic Sinu. Diameter	)mage&ode Q 5;0364,S1H,& &ode
Duct Art Diam	&12212;03,&1#S,Ductu. Arter(Diameter	)mage&ode Q 5;03A2,S1H,2D mode
-re Ducta'	&12212;04,&1#S,-re0iou. Ducta' Diameter	)mage&ode Q 5;03A2,S1H,2D mode
=CA	&12212;0+,&1#S,=eft Coronar(Arter(Diameter	)mage&ode Q 5;03A2,S1H,2D mode
1CA	&12212;06,&1#S,1ight Coronar(Arter(Diameter	)mage&ode Q 5;03A2,S1H,2D mode
AAo ,ma7	11726;7,=3,-ea9 ,e'ocit(	
DAo ,ma7	11726;7,=3,-ea9 ,e'ocit(	
AAo -5ma7	20247;3,=3,-ea9 5radient	
DAo -5ma7	20247;3,=3,-ea9 5radient	

9.4 ." . P)(,on$r+ Ar&er+ Me$s)re,en&s

&-A DiamD2DE	1*020;*,=3,&ain -u'monar(Arter(Diameter	)mage&ode Q5;03A2,S1H,2D mode
&-A DiamD&E	1*020;*,=3,&ain -u'monar(Arter(Diameter	)mage&ode Q5;0364,S1H,& &ode
1-A DiamD2DE	1*021;6,=3,1ight -u'monar(Arter(Diameter	)mage&ode Q5;03A2,S1H,2D mode
1-A DiamD&E	1*021;6,=3,1ight -u'monar(Arter(Diameter	)mage&ode Q5;0364,S1H,& &ode
=-A DiamD2DE	1*016;0,=3,=eft -u'monar(Arter(Diameter	)mage&ode Q5;03A2,S1H,2D mode
=-A DiamD&E	1*016;0,=3,=eft -u'monar(Arter(Diameter	)mage&ode Q5;0364,S1H,& &ode
&-A ,ma7	5;03*A,S1H,&ain -u'monar(Arter(-ea9 ,e'ocit(	
-o.t Ducta'	&12210;01,&1#S,-o.terior ducta' Diameter	)mage&ode Q5;03A2,S1H,2D mode
-A2D-	C12210;01,&1#S,-u'monar(Arter(2nd Dia.to'ic -re..ure	
=-A ,ma7	11726;7,=3,-ea9 ,e'ocit(	
1-A ,ma7	11726;7,=3,-ea9 ,e'ocit(	
&-A -5ma7	20247;3,=3,-ea9 5radient	
=-A -5ma7	20247;3,=3,-ea9 5radient	
1-A -5ma7	20247;3,=3,-ea9 5radient	

9.4 ."". Ven$ C$.$ Me$s)re ,en&s

), C Diam𝔻)n.$E	1*006;7,=3,)nferior ,ena Ca0a Diameter	1e.$irator(C(c'e-ointQ!;20010,S1H, During)n.$iration)mage&ode Q5;03A2,S1H,2D mode
), C Diam𝔻27$irE	1*006;7,=3,)nferior ,ena Ca0a Diameter	1e.$irator(C(c'e-ointQ!;20020,S1H, During 27$iration)mage&ode Q5;03A2,S1H,2D mode
S, C Diam𝔻)n.$E	&1221+;01,&1#S,Su$erior ,ena Ca0a Diameter	1e.$irator(C(c'e-ointQ!;20010,S1H, During)n.$iration)mage&ode Q5;03A2,S1H,2D mode
S, C Diam𝔻27$irE	&1221+;01,&1#S,Su$erior ,ena Ca0a Diameter	1e.$irator(C(c'e-ointQ!;20020,S1H, During 27$iration)mage&ode Q5;03A2,S1H,2D mode
), C ,e'𝔻)n.$E	&1221+;02,&1#S,)nferior ,ena Ca0a ,e'ocit(	1e.$irator(C(c'e-ointQ!;20010,S1H, During)n.$iration
), C ,e'𝔻27$irE	&1221+;02,&1#S,)nferior ,ena Ca0a ,e'ocit(	1e.$irator(C(c'e-ointQ!;20020,S1H, During 27$iration
S, C ,e'𝔻)n.$E	&1221+;03,&1#S,Su$erior ,ena Ca0a ,e'ocit(	1e.$irator(C(c'e-ointQ!;20010,S1H, During)n.$iration
S, C ,e'𝔻27$irE	&1221+;03,&1#S,Su$erior ,ena Ca0a ,e'ocit(	1e.$irator(C(c'e-ointQ!;20020,S1H, During 27$iration
), C)n.$iration -5	C1221+;01,&1#S,)nferior ,ena Ca0a -re..ure 5radient	1e.$irator(C(c'e-ointQ!;20010,S1H, During)n.$iration
), C 27$iration -5	C1221+;01,&1#S,)nferior ,ena Ca0a -re..ure 5radient	1e.$irator(C(c'e-ointQ!;20020,S1H, During 27$iration
S, C)n.$iration -5	C1221+;02,&1#S,Su$erior ,ena Ca0a -re..ure 5radient	1e.$irator(C(c'e-ointQ!;20010,S1H, During)n.$iration
S, C 27$iration -5	C1221+;02,&1#S,Su$erior ,ena Ca0a -re..ure 5radient	1e.$irator(C(c'e-ointQ!;20020,S1H, During 27$iration

9.4 ."!. P)(, on$r+ Veno)s S&r)'&)re Me$s)re ,en&s

-, ein A Dur	5;03*4,S1H,-u'monar(,ein A;8a0e Duration	
-, ein D ,H)	5;03*D,S1H,-u'monar(,ein D;8a0e ,e'ocit(Hime)ntegra'	
-, ein S ,H)	5;03*C,S1H,-u'monar(,ein S;8a0e ,e'ocit(Hime)ntegra'	
-, ein S ,e'	&12214;01,&1#S,-u'monar(,ein S Ba0e f'oB ,e'ocit(	

- , ein D , e'	&12214;02,&1#S,-u'monar(, ein D;Ba0e f'oB , e'ocit(	
- , ein A , e'	&12214;03,&1#S,-u'monar(, ein A;Ba0e f'oB , e'ocit(	
- , ein DecH	&12214;04,&1#S,-u'monar(, ein Dece'eration Hime	
- , ein S/D	&12214;0+,&1#S,-u'monar(, ein 1atio of S;8a0e 0e'ocit(to D;Ba0e 0e'ocit(	
- , ein S!	&12214;06,&1#S,-u'monar(, ein S(.to'ic fraction	

9.4 ."':. C$r*i$' S=)n& S&)*+ Me$s)re ,en&s

:$/:.	26462;6,=3,-u'monar(;to;S(.temic Shunt !'oB 1atio	
:$;:.	&12217;01,&1#S,-u'monar(;.u";S(.temic Shunt !'oB Difference	
-, C1D:$/:.E	**67;4,=3,Ceart rate	
A, C1D:$/:.E	**67;4,=3,Ceart rate	
-, S,D:$/:.E	!;32120,S1H,Stro9e , o'ume	
-, COD:$/:.E	!;32100,S1H,Cardiac Out$ut	
A, S,D:$/:.E	!;32120,S1H,Stro9e , o'ume	
A, COD:$/:.E	!;32100,S1H,Cardiac Out$ut	

9.4 ."4. Con%eni&$(Ano , $(+ o- C$r*io.$s')($r S+s&e , Me$s)re ,en&s

-DA Diam	&1221*;01,&1#S,-atent Ductu. Arterio.u. Diameter	)mage&ode Q5;03A2,S1H,2D mode
-!O Diam	&1221*;02,&1#S,-atent !oramen O0a'e Diameter	)mage&ode Q5;03A2,S1H,2D mode
-DA , e'DdE	&1221*;03,&1#S,-atent Ductu. Arterio.u. Dia.to'ic , e'ocit(	
-DA , e'D.E	&1221*;04,&1#S,-atent Ductu. Arterio.u. S(.to'ic , e'ocit(	
Coarc -re;Duct	&1221*;0+,&1#S,Coarctation of -re;Ductu. , e'ocit(	
Coarc -o.t;Duct	&1221*;06,&1#S,Coarctation of -o.t;Ductu. , e'ocit(	
-DA Dia. -5	&1221*;07,&1#S,-atent Ductu. Arterio.u. Dia.to'ic -re..ure 5radient	
-DA S(. -5	&1221*;0*,&1#S,-atent Ductu. Arterio.u. S(.to'ic -re..ure 5radient	

C15i".on.2D	**67;4 =3 Ceart rate	&ethodQ ,&1222*;03,&1#S,5i".on
C15i".on.&	**67;4 =3 Ceart rate	&ethodQ ,&1222*;03,&1#S,5i".on

C. A$$endi7 > , a.cu'ar .tructured re$orting tem$'ate

$his a: :endiJ lists the DI" ! M Str'+t'red Re: *rt >SR? 2a: :ings 'sed in the 7as+'lar Str'+t'red Re: *rts *4 'ltras*'nd syste2 SR 4iles%

$he 2a: :ings are *rgani.ed in a 2anner si2ilar t* the DI" ! M SR $e2: lates as des+ri3ed in , S 5%1G *4 the DI" ! M Standard% $he 7as+'lar Re: *rt 2a: :ings 4*ll* ; the DI" ! M SR $e2: late $ID /100F 7as+'lar =ltras*'nd , r*+ed're Re: *rt& eJ+e: t ; here n*ted%

All : rivate +*de val'es 'se the " *ding S+he2e Designat*r RMR=SR%

C.". TID 3A" 4 V$s')($r U(&r$so)* Re8or&

$his is the te2: late 4*r the r**t the +*ntent tree 4*r the vas+'lar 'ltras*'nd : r*+ed're re: *rt%

	N L	Rel with Parent	VT	Concept Name	Used in MODAL ITY	Value Set Constraint	Comment
1			CO3HA)321	2, D12+100, DC&, L, a.cu'ar #'tra.ound -rocedure 1e$ortME			
2	O	CAS O4S CO3H2?H	COD2	2, D1;40!4*, S1H, LHem$ora' $eriod. 1e'ating to -rocedureME		DC)D D12102E Hem$ora' -eriod. 1e'ating Ho -rocedure or Hhera$(	
3	O	CAS CO3C2-H &OD	)3C= #D2	DH)D D1204E =anguage of Content)tem and De.cendant.			
4	O	CAS O4S CO3H2?H	)3C=#D2	DH)D D1001E O".er0ation Conte7t			
+	O	CO3HA)3S	)3C=#D2	DH)D D+101E , a.cu'ar -atient Characteri.tic.			
6	O	CO3HA)3S	CO3HA)321	2, D11102*, DC&,			

6	O	CO3HA)3S	)3C=#D2	DH)D D+103E ,a.cu'ar #'tra.ound Section		VSectionSco$e Q DH DH;40+01, S1H, M4'ood ,e..e' of CeadME VSection=atera'it(Q 2, D5;A101, S1H, M=eftME VAnatom(Q DC)D D1210+E)ntracrania' Cere"ra' ,e..e'.	
10	O	CO3HA)3S	)3C=#D2	DH)D D+103E ,a.cu'ar #'tra.ound Section		VSectionSco$e Q DH DH;40+01, S1H, M4'ood ,e..e' of CeadME VSection=atera'it(Q 2, D5;A100, S1H, M1ightME VAnatom(Q DC)D D1210+E)ntracrania' Cere"ra' ,e..e'.	
11	O	CO3HA)3S	)3C=#D2	DH)D D+103E ,a.cu'ar #'tra.ound Section		VSectionSco$e Q DH DH;40+01, S1H, M4'ood ,e..e' of CeadME VSection=atera'it(Q 2, D5;A103, S1H, M#ni'atera'ME VAnatom(Q DC)D D12106E)ntracrania' Cere"ra' ,e..e'. Duni'atera'E	
12	O	CO3HA)3S	)3C=#D2	DH)D D+103E ,a.cu'ar #'tra.ound Section		VSectionSco$e Q DH DH;4+00+, S1H, MArter(of nec9ME VSection=atera'it(Q 2, D5;A101, S1H, M=eftME VAnatom(Q DC)D D12104E 27tracrania' Arterie. VAnatom(1atio Q DC)D D12123E Carotid 1atio.	

13	O	CO3HA)3S	)3C=#D2	DH)D D+103E ,a.cu'ar #'tra.ound Section		VSectionSco$e Q DH DH;4+00+, S1H, MArter(of nec9ME VSection=atera'it(Q 2, D5;A100, S1H, M1ightME VAnatom(Q DC)D D12104E 27tracrania' Arterie. VAnatom(1atio Q DC)D D12123E Carotid 1atio.	
14	O	CO3HA)3S	)3C=#D2	DH)D D+103E ,a.cu'ar #'tra.ound Section		VSectionSco$e Q DH DH;47040, S1H, MArter(of =oBer 27tremit(ME VSection=atera'it(Q 2, D5;A101, S1H, M=eftME VAnatom(Q DC)D D12106E =oBer 27tremit(Arterie. VAnatom(1atio Q *+*1;1,=3,Hi"ia'/"rachi a' inde7	
1+	O	CO3HA)3S	)3C=#D2	DH)D D+103E ,a.cu'ar #'tra.ound Section		VSectionSco$e Q DH DH;47040, S1H, MArter(of =oBer 27tremit(ME VSection=atera'it(Q 2, D5;A100, S1H, M1ightME VAnatom(Q DC)D D12106E =oBer 27tremit(Arterie. VAnatom(1atio Q *+*1;1,=3,Hi"ia'/"rachi a' inde7	
16	O	CO3HA)3S	)3C=#D2	DH)D D+103E ,a.cu'ar #'tra.ound Section		VSectionSco$e Q DH DH;46403, S1H, M,ein of =oBer 27tremit(ME VSection=atera'it(Q 2, D5;A101, S1H, M=eftME VAnatom(Q DC)D D12110E =oBer 27tremit(,ein.	

17	O	CO3HA)3S	)3C=#D2	DH)D D+103E ,a.cu'ar #'tra.ound Section		VSectionSco$e Q DH DH;46403, S1H, M,ein of =oBer 27tremit(ME VSection=atera'it(Q 2, D5;A100, S1H, M1ightME VAnatom(Q DC)D D12110E =oBer 27tremit(,ein.	
1*	O	CO3HA)3S	)3C=#D2	DH)D D+103E ,a.cu'ar #'tra.ound Section		VSectionSco$e Q DH DH;47020, S1H, MArter(Of #$$er 27tremit(ME VSection=atera'it(Q 2, D5;A101, S1H, M=eftME VAnatom(Q DC)D D12107E #$$er 27tremit(Arterie.	
16	O	CO3HA)3S	)3C=#D2	DH)D D+103E ,a.cu'ar #'tra.ound Section		VSectionSco$e Q DH DH;47020, S1H, MArter(Of #$$er 27tremit(ME VSection=atera'it(Q 2, D5;A100, S1H, M1ightME VAnatom(Q DC)D D12107E #$$er 27tremit(Arterie.	
20	O	CO3HA)3S	)3C=#D2	DH)D D+103E ,a.cu'ar #'tra.ound Section		VSectionSco$e Q DH DH;47020, S1H, MArter(Of #$$er 27tremit(ME VSection=atera'it(Q 2, D5;A100, S1H, M #ni'atera'ME VAnatom(Q DC)D DS2=!C)D;2E #$$er 27tremit(Arterie.Duni'atera'E	

2+	O	CO3HA)3S	)3C=#D2	DH)D D+103E ,a.cu'ar #'tra.ound Section		VSectionSco$e Q DH DH;46002, S1H, MArter(of A"domenME VSection=atera'it(Q 2, D5;A103, S1H, M#ni'atera'ME VAnatom(Q DC)D D12112E A"domina' Arterie. Duni'atera'E	
26	O	CO3HA)3S	)3C=#D2	DH)D D+103E ,a.cu'ar #'tra.ound Section		VSectionSco$e Q DH DH;4*7A0, S1H, M,ein of A"domenME VSection=atera'it(Q 2, D5;A101, S1H, M=eftME VAnatom(Q DC)D D12113E A"domina' ,ein. D'atera'E	
27	O	CO3HA)3S	)3C=#D2	DH)D D+103E ,a.cu'ar #'tra.ound Section		VSectionSco$e Q DH DH;4*7A0, S1H, M,ein of A"domenME VSection=atera'it(Q 2, D5;A100, S1H, M1ightME VAnatom(Q DC)D D12113E A"domina' ,ein. D'atera'E	
2*	O	CO3HA)3S	)3C=#D2	DH)D D+103E ,a.cu'ar #'tra.ound Section		VSectionSco$e Q DH DH;4*7A0, S1H, M ,ein of A"domenME VSection=atera'it(Q 2, D5;A103, S1H, M#ni'atera'ME VAnatom(Q DC)D D12114E A"domina' ,ein. Duni'atera'E	

4	0	CAS O4S CO3H2?H	COD2	2, D121010,DC&, L -er.on O".er0erP. 1o'e in the OrganiKationME		D121063, DC&, WSonogra$herWE	
+	0	CAS O4S CO3H2?H	COD2	2, D121024, DC&, WSu"Iect C'a..ME		D12102+, DC&, W-atientME	
6	0	CAS O4S CO3H2?H	-3A&2	2, D121026,DC&, WSu"Iect 3ameME		0a'ue of -atientP. 3ame D0010,0010E in -atient &odu'e	
7	0	CAS O4S CO3H2?H	DAH2	2, D121031,DC&, WSu"Iect 4irth DateME		0a'ue of -atientP. 4irth Date D0010,0030E in -atient &odu'e	
*	0	CAS O4S CO3H2?H	COD2	2, D121032,DC&, WSu"Iect Se7ME		0a'ue eAui0a'ent to -atientP. Se7 D0010,0040E in -atient &odu'e	
6	0	CAS O4S CO3H2?H	3#&	2, D121033,DC&, WSu"Iect AgeME		0a'ue of -atientP. Age D0010,1010E in -atient Stud(&odu'e	

C.:. TID 3A" "4 V$s')($r P$&ien& C=$r$'&eris&i's

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Value Set Constraint	Comment
1			CO3H A)321	2, D12111*, DC&, L-atient Characteri.tic.ME			
2	0	CO3HA)3S	3#&	2, D121033, DC&, WSu"Iect AgeME		#nit. Q DC)D D74+6E #nit. of &ea.ure for Age	
3	0	CO3HA)3S	COD2	2, D121032, DC&, WSu"Iect Se7ME		DC)D D74++E Se7	
4	0	CO3HA)3S	3#&	2, D**67;4, =3, LCeart 1ateME			
+	0	CO3HA)3S	3#&	2, D!;00*2C, S1H, LS(.to'ic 4'ood -re..ureME			

6	O	CO3HA)3S	3#&	2, D!;00*2D, S1H, WDia.to'ic 4'ood -re..ureWE			

C.4. TID 3A" !4 V$s')($r Pro'e*)re S),,$r+ Se'&ion

16	000	CO3HA)3S	H2?H	D5;A101,S3&3,=eftE			
17	0	CO3HA)3S	CO3HA)321	DH;4+160,S1H,Carotid 4ifurcationE			
1*	00	CO3HA)3S	CO3HA)321	D!5346+;01, &1#S, -'aAue De.cri$tionE			
16	000	CO3HA)3S	H2?H	D5;A100,S3&3,1ightE			
20	000	CO3HA)3S	H2?H	D5;A101,S3&3,=eftE			
21	00	CO3HA)3S	CO3HA)321	D!5346+;02, &1#S, -'aAue AreaE			
22	000	CO3HA)3S	H2?H	D5;A100,S3&3,1ightE			
23	000	CO3HA)3S	H2?H	D5;A101,S3&3,=eftE			
24	0	CO3HA)3S	CO3HA)321	DH;4+300, S1H,)nterna' Carotid Arter(E			)CA
2+	00	CO3HA)3S	CO3HA)321	D!5346+;01, &1#S, -'aAue De.cri$tionE			
26	000	CO3HA)3S	H2?H	D5;A100,S3&3,1ightE			
27	000	CO3HA)3S	H2?H	D5;A101,S3&3,=eftE			
2*	00	CO3HA)3S	CO3HA)321	D!5346+;02, &1#S, -'aAue AreaE			
26	000	CO3HA)3S	H2?H	D5;A100,S3&3,1ightE			
30	000	CO3HA)3S	H2?H	D5;A101,S3&3,=eftE			
31	0	CO3HA)3S	CO3HA)321	DH;4+200,S1H,27terna' Carotid Arter(E			2CA
32	00	CO3HA)3S	CO3HA)321	D!5346+;01, &1#S, -'aAue De.cri$tionE			
33	000	CO3HA)3S	H2?H	D5;A100,S3&3,1ightE			
34	000	CO3HA)3S	H2?H	D5;A101,S3&3,=eftE			
3+	00	CO3HA)3S	CO3HA)321	D!5346+;02, &1#S, -'aAue AreaE			
36	000	CO3HA)3S	H2?H	D5;A100,S3&3,1ightE			
37	000	CO3HA)3S	H2?H	D5;A101,S3&3,=eftE			
3*	0	CO3HA)3S	CO3HA)321	DH;4+700 ,S1H , , erte"ra' Arter(E			
36	00	CO3HA)3S	H2?H	D5;A100,S3&3,1ightE			
40	00	CO3HA)3S	H2?H	D5;A101,S3&3,=eftE			
41	0	CO3HA)3S	CO3HA)321	DH;46100,S1H,Su"c'a0ian			

				Arter(E			
42	OO	CO3HA)3S	H2?H	D5;A100,S3&3,1ightE			
43	OO	CO3HA)3S	H2?H	D5;A101,S3&3,=eftE			
44	O	CO3HA)3S	H2?H	DH;46010,S1H,4rachioce$ha'ic trun9E			

C.A. TID 3A" :4 V$s')($r U(&r$so)n* Se'&ion

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Value Set Constraint	Comment
1			CO3HA)321	DH D121070, DC&, L!inding.ME			
2	O	CAS CO3C2-H &OD	COD2	2, D5;C023, S1H, L!inding SiteME		VSectionSco$e	
3	O	CAS CO3C2-H &OD	COD2	2, D5;C171, S1H, L=atera'it(ME		VSection=atera'it(	
4	O	CO3HA)3S	)3C=#D2	DH)D D+104E ,a.cu'ar &ea.urement 5rou$		VAnatom(5rou$ Q VAnatom(Q DC)D D1210+E)ntracrania' Cere"ra' ,e..e'.	
+	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement		V&ea.urement Q VAnatom(1atio	On'(for Arter(of nec9

C.B. TID 3A" 44 V$s')($r U(&r$so)n* Me$s)re ,en& Gro)8

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Value Set Constraint	Comment
1			CO3HA)321	VAnatom(5rou$	√		
2	O	CAS CO3C2-H &OD	COD2	2, D5;A1!*, S1H, LHo$ogra$hica'	√	DC)D D12116E ,e..e' Segment &odifier.	

				&odifierME			
3	O	CAS CO3C2-H &OD	COD2	2 , D12+101, DC&, L , e..e' 4ranchME		DC)D D12117E , e..e' 4ranch &odifier.	
4	O	CO3HA)3S	)3C=#D2	DH)D D300E &ea.urement	√	V&ea.urement Q DC)D D12116E , a.cu'ar #'tra.ound -ro$ert(VDeri0ation Q DC)D D3627E &ea.urement H($e	
+	OO	CAS CO3C2-H &OD	COD2	2 , D1;40*6A, S1H, LCardiac C(c'e -ointME		DC)D D12233E Cardiac -ha.e	
6	OO	CAS CO3C2-H &OD	COD2	2 , D1;41!!C, S1H, LHem$ora' $eriod re'ated to eatingME		DH D5;A461, S1H, W-o.t;$randia'WE	

C.D. CID 3"!" 44 E<&r$'r$ni$(Ar&eries

CSD	CV	Code Meaning
S1H	H;4+170	Carotid 4u'"
S1H	H;4+100	Common Carotid Arter(
S1H	H;4+200	27terna' Carotid Arter(
S1H	H;4+300	)nterna' Carotid Arter(
S1H	H;46100	Su"c'a0ian Arter(
S1H	H;4+700	, erte"ra' Arter(

C.8. CID 3"!" A4 In&r$'r$ni$(Cere0r$(Vesse(s

CSD	CV	Code Meaning
S1H	H;4++40	Anterior Cere"ra' Arter(
S1H	H;4+600	&idd'e Cere"ra' Arter(
S1H	H;4+600	-o.terior Cere"ra' Arter(
S1H	H;4+320	-o.terior Communicating Arter(

C.#. CID 3"!" B4 In&r$'r$ni$(Cere0r$(Vesse(s 3)ni($&er$(4

CSD	CV	Code Meaning
S1H	H;4+*00	4a.i'ar Arter(
S1H	H;4++30	Anterior Communicating Arter(
&1#S	,12106;01	4a.i'ar ,ein

C." . CID 3"!" D4 U88er E<&re ,i&+ Ar&eries

CSD	CV	Code Meaning
S1H	H;47100	A7i''ar(Arter(
S1H	H;47160	4rachia' Arter(
S1H	H;47300	1adia' Arter(
S1H	H;46100	Su"c'a0ian Arter(
S1H	H;47200	#'nar Arter(

C."". CID 3SELFCID-!4 U88er E<&re ,i&+ Ar&eries3)ni($&er$(4

CSD	CV	Code Meaning
S1H	H;46010	)nnominate Arter(

C."!. CID 3"!" 84 U88er E<&re ,i&+ Veins

CSD	CV	Code Meaning
S1H	H;46110	A7i''ar(0ein
S1H	H;4*0+2	4a.i'ic 0ein
S1H	H;463+0	4rachia' 0ein
S1H	H;46240	Ce$ha'ic 0ein
S1H	H;46340	1adia' 0ein
S1H	H;4*330	Su"c'a0ian 0ein
S1H	H;46330	#'nar 0ein

C.":. CID 3"!" #4 Lo/er E<&re ,i&+ Ar&eries

CSD	CV	Code Meaning
S1H	H;46710	Common)'iac Arter(
S1H	H;47700	Anterior Hi"ia' Arter(
S1H	H;47400	Common !emora' Arter(

CSD	CV	Code Meaning
S1H	H;47741	Dor.a'i. -edi. Arter(
S1H	H;46610	27terna')'iac Arter(
S1H	H;46740	)nterna')'iac Arter(
S1H	H;47630	-eronea' Arter(
S1H	H;47+00	-o$'itea' Arter(
S1H	H;47600	-o.terior Hi"ia' Arter(
S1H	H;47440	-rofunda !emori. Arter(
S1H	H;47403	Su$erficia' !emora' Arter(
&1#S	,12106;01	H- Hrun9 Arter(

C."4. CID 3"!"" 4 Lo/er E<&re,i&+ Veins

CSD	CV	Code Meaning
S1H	H;46630	Anterior Hi"ia' ,ein
S1H	5;03+4	Common !emora' ,ein
S1H	H;4*620	Common)'iac ,ein
S1H	H;4*630	27terna')'iac ,ein
S1H	H;4642D	5a.trocnemiu. 0ein
S1H	H;46+30	5reat Sa$henou. ,ein
S1H	H;46++0	=e..er Sa$henou. ,ein
S1H	H;466+0	-eronea' ,ein
S1H	H;46640	-o$'itea' ,ein
S1H	H;46620	-o.terior Hi"ia' ,ein
S1H	H;46660	-rofunda !emori. ,ein
S1H	5;0364	So'ea' 0ein
S1H	5;03+A	Su$erficia' !emora' ,ein
S1H	H;4*640	)nterna' i'iac 0ein
S1H	H;46410	!emora' 0ein
&1#S	,12110;01	H- Hrun9 ,ein

C."A. CID 3"!""!4 A0*o,in$(Ar&eries 3)ni($&er$(4

CSD	CV	Code Meaning
S1H	H;42000	Aorta
S1H	H;46400	Ce'iac A7i.

CSD	CV	Code Meaning
S1H	H;46421	Common Ce$atic Arter(
S1H	H;46422	-ro$er Ce$atic Arter(
S1H	H;46460	S$'enic Arter(
S1H	H;46+10	Su$erior &e.enteric Arter(

C."B. CID 3"!""44 A0*o,in$(Veins 3)ni($&er$(4

CSD	CV	Code Meaning
S1H	H;4*720	Ce$atic ,ein
S1H	H;4*727	=eft Ce$atic ,ein
S1H	H;4*72+	1ight Ce$atic ,ein
S1H	H;4*726	&idd'e Ce$atic ,ein
S1H	H;4**10	-orta' ,ein
S1H	H;4*710	)nferior ,ena Ca0a
S1H	H;4**60	S$'enic ,ein
S1H	H;4**40	Su$erior &e.enteric ,ein
&1#S	,12114;01	&ain -orta' ,ein

C."D. CID 3"!""A4 Ren$(Vesse(s

CSD	CV	Code Meaning
S1H	H;46600	1ena' Arter(
S1H	H;4*740	1ena' ,ein
S1H	H;466+6	Segmenta' Arter(
S1H	H;466*A	Arcuate Arter(of the Tidne(
S1H	H;4667D	)nter'o"ar Arter(of Tidne(
&1#S	,1211+;01	&ain 1ena' Arter(

C."8. CID 3"!""B4 Vesse(Se%,en& Mo*i-iers

CSD	CV	Code Meaning
S1H	5;A116	Di.ta'
S1H	5;A1**	&id;'ongitudina'
S1H	5;036A	Origin of 0e..e'
S1H	5;A11*	-ro7ima'
S1H	1;102+4	Di'ated $ortion of .egment

C."#. M$88in% 0e&/een Mo*$(i&+ ,e$s)re,en&s $n* DICOM Con'e8&s.

C."#.". V$s')($r Me$s)re,en&s

[,a.cu'ature Anatomic =ocation0 2D	116+3;3, =3, 2nd Dia.to'ic ,e'ocit(
[,a.cu'ature Anatomic =ocation0 &D	1166+;7 , =3, &inimum Dia.to'ic ,e'ocit(
[,a.cu'ature Anatomic =ocation0 -S	11726;7, =3, -ea9 S(.to'ic ,e'ocit(
[,a.cu'ature Anatomic =ocation0 HA&2A3	203+2;1, =3, Hime a0eraged mean 0e'ocit(
[,a.cu'ature Anatomic =ocation0 HA&A?	11662;1, =3, Hime a0eraged $ea9 0e'ocit(
[,a.cu'ature Anatomic =ocation0 -,	11726;7, =3, -ea9 ,e'ocit(
[,a.cu'ature Anatomic =ocation0 -)	1200*;6, =3, -u'.ati'it( )nde7
[,a.cu'ature Anatomic =ocation0 1)	12023;*, =3, 1e.i.ti0it( )nde7
[,a.cu'ature Anatomic =ocation0 S/D	12144;2, =3, S(.to'ic to Dia.to'ic ,e'ocit(1atio
[,a.cu'ature Anatomic =ocation0 D/S	&12116;04, &1#S, Dia.to'ic to S(.to'ic,e'ocit(1atio
[,a.cu'ature Anatomic =ocation0 AH	2016*;1, =3, Acce'eration Hime
[,a.cu'ature Anatomic =ocation0 DH	20217;6, =3, Dece'eration Hime
[,a.cu'ature Anatomic =ocation0 --5	20247;3, =3, -ea9 5radient
[,a.cu'ature Anatomic =ocation0 &-5	202+6;4, =3, &ean 5radient
[,a.cu'ature Anatomic =ocation0 &&-5	&12116;01, &1#S, &ean ,e'ocit(&ean -re..ure 5radient
[,a.cu'ature Anatomic =ocation0 ,H)	&12116;02, &1#S,,e'ocit(;Hime)ntegra'
[,a.cu'ature Anatomic =ocation0 C1	**67;4, =3, Ceart 1ate
[,a.cu'ature Anatomic =ocation0 \	&12116;03, &1#S, Ang'e
[,a.cu'ature Anatomic =ocation0 ,D	1;102+C, S1H, ,e..e')ntima' Diameter
[,a.cu'ature Anatomic =ocation0 ,o'!'oB	&12116;06, &1#S, ,o'!'oBDHA&A?E
[,a.cu'ature Anatomic =ocation0 ,o'!'oB.HA&2A3	&12116;07, &1#S,,o'!'oBDHA&2A3E

C."#.!. E<&r$'r$ni$(Ar&eries

4u'"	H;4+170,S1H,Carotid 4u'"
CCA	H;4+100,S1H,Common Carotid Arter(
2CA	H;4+200,S1H,27terna' Carotid Arter(
)CA	H;4+300,S1H,)nterna' Carotid Arter(
Su"c'a0 A	H;46100,S1H,Su"c'a0ian Arter(
,ert A	H;4+700,S1H,,erte"ra' Arter(

#'nar ,	H;46330,S1H,#'nar 0ein

C."#.8. Lo/er E<&re,i&+ Ar&eries

C.)'iac A	H;46710,S1H,Common)'iac Arter(
A.Hi" A	H;47700,S1H ,Anterior Hi"ia' Arter(
C!A	H;47400,S1H ,Common !emora' Arter(
Dor..-ed A	H;47741,S1H,Dor.a'i. -edi. Arter(
27.)'iac A	H;46610,S1H ,27terna')'iac Arter(
))A	H;46740,S1H ,)nterna')'iac Arter(
-eronea' A	H;47630,S1H ,-eronea' Arter(
-o$ A	H;47+00,S1H ,-o$'itea' Arter(
-.Hi" A	H;47600,S1H ,-o.terior Hi"ia' Arter(
-!A	H;47440,S1H ,-rofunda !emori. Arter(
S!A	H;47403 ,S1H ,Su$erficia' !emora' Arter(
H- Hrun9 A	,12106;01,&1#S,H- Hrun9 Arter(

C."#.#. Lo/er E<&re,i&+ Veins

A.Hi" ,	H;46630,S1H,Anterior Hi"ia' ,ein
C!,	5;03+4,S1H,Common !emora' ,ein
C.)'iac ,	H;4*620,S1H,Common)'iac ,ein
27.)'iac ,	H;4*630,S1H,27terna')'iac ,ein
Sura' ,	H;4642D,S1H,5a.trocnemiu. 0ein
Sa$h ,	H;46+30,S1H,5reat Sa$henou. ,ein
SS,	H;46++0,S1H,=e..er Sa$henou. ,ein
-eronea' ,	H;466+0,S1H,-eronea' ,ein
-o$,	H;46640,S1H,-o$'itea' ,ein
-.Hi" ,	H;46620,S1H,-o.terior Hi"ia' ,ein
-!,	H;46660,S1H,-rofunda !emori. ,ein
So'ea' ,	5;0364,S1H,So'ea' 0ein
S!,	5;03+A,S1H,Su$erficia' !emora' ,ein
)),	H;4*640,S1H,)nterna' i'iac 0ein
!emora' ,	H;46410,S1H,!emora' 0ein
H- Hrun9 ,	,12110;01,&1#S,H- Hrun9 ,ein

C."#." . A0*o,in$(Ar&eries 3)ni($&er$(4

A"domina' Aorta	H;42000,S1H,Aorta
Ce'iac A7i.	H;46400,S1H,Ce'iac A7i.
C Ce$atic A	H;46421,S1H,Common Ce$atic Arter(
Ce$atic A	H;46422,S1H,-ro$er Ce$atic Arter(
S$'enic A	H;46460,S1H,S$'enic Arter(
S&A	H;46+10,S1H,Su$erior &e.enteric Arter(

C."#.""."A0*o,in$(Veins 3)ni($&er$(4

Ce$atic ,	H;4*720,S1H,Ce$atic ,ein
=eft Ce$atic ,	H;4*727,S1H,=eft Ce$atic ,ein
1ight Ce$atic ,	H;4*72+,S1H,1ight Ce$atic ,ein
& Ce$atic ,	H;4*726,S1H,&idd'e Ce$atic ,ein
-orta' ,	H;4**10,S1H,-orta' ,ein
),C	H;4*710,S1H,)nferior ,ena Ca0a
S$'enic ,	H;4**60,S1H,S$'enic ,ein
S& ,	H;4**40,S1H,Su$erior &e.enteric ,ein
& -orta' ,	,12114;01,&1#S,&ain -orta' ,ein

C."#."!. Ren$(Vesse(s

1en A Org	H;46600,S1H,1ena' Arter(
1ena' A	H;46600,S1H,1ena' Arter(
1ena' ,	H;4*740,S1H,1ena' ,ein
Segment A	H;466+6, S1H, Segmenta' Arter(

D. A$$endi7 › 4rea.t)maging .tructured re$orting tem$'ate

$his a::endiJ lists the DI"!M Str'+t'red Re:*rt >SR? 2a::ings 'sed in the reast Str'+t'red Re:*rts *4 'ltras*'nd syste2 SR 4iles%

$he 2a::ings are *rgani.ed in a 2anner si2ilar t* the DI"!M SR $e2:lates as des+ri3ed in ,S 5%1G *4 the DI"!M Standard% $he reast Re:*rt 2a::ings 4*ll*; the DI"!M SR $e2:late $ID 4200F reast I2aging Re:*rt& eJ+e:t ; here n*ted%

All :rivate +*de val'es 'se the "*ding S+he2e Designat*r RMR=SR%

D.". TID "4 Line$r Me$s)re , en& Te , 8($&e

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			3#&	DC)D D7470E L=inear &ea.urement.M			#3)HS Q DC)DD7460E L#nit. of =inear &ea.urementM
2	0	)3!2112D !1O&	SCOO1D	2, D1210++,DC&, L-athME			
3	00	1;S2=2CH 2D !1O&	)&A52				
4	00	S2=2CH2D !1O&	)&A52				
+	0	)3!2112D !1O&	SCOO1D	2, D121230, DC&, L-ath ,erte7ME			
6	00	1;S2=2CH 2D !1O&	)&A52				
7	00	S2=2CH2D !1O&	)&A52				

D.!. TID 34! 4 9REAST IMAGING REPORT

$his is the te2:late 4*r the r**t the +*ntent tree 4*r the 3reast 'ltras*'nd :r*+ed're re:*rt%

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CO3HA)32 1	2, D111400, DC&, M4rea.t)maging 1e$ortME	√		
2	0	CAS	)3C=#D2	DH)D D1204E =anguage of	√		

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
		CO3C2-H &OD		Content)tem and De.cendant.			
3	0	CO3HA)3S	)3C=#D2	DH)D D4202E 4rea.t)maging 1e$ort 3arrati0e	√		
4	0	CO3HA)3S	CO3HA)32 1	DH D11102*, DC&, L)mage =i"rar(ME	√		
+	00	CO3HA)3S	)&A52	3o uro.e of reference	√		
6	0	CO3HA)3S	)3C=#D2	DH)D DS2=!H&-;3E 412ASH)&A5)35 S#&&A/	√		
7	0	CO3HA)3S	)3C=#D2	DH)D D420*E 4rea.t)maging 1e$ort Su$$'ementar(Data	√		
*	0	CO3HA)3S	H2?H	D20121120,&1#S,M.e'f;de fined;mea.urementfi'eME	√		

D.:. TID 34! "4 9REAST IMAGING PROCEDURE REPORTED

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			COD2	2, D1210+*, DC&, M-rocedure re$ortedME	√		DC)D D60+0E 4rea.t -rocedure 1e$orted
2	0	CAS CO3C2-H &OD	COD2	2, D111464, DC&, L-rocedure &odifier ME			DC)D D60+*E -rocedure &odifier. for 4rea.t
3	0	CAS CO3C2-H &OD	COD2	2, D5;C171, S1H, M=atera'it(ME	√		DC)D D6022E Side
4	0	CAS -1O-21H)2S	COD2	2, D111401, DC&, M1ea.on for $rocedureME			DC)D D60+1E 4rea.t -rocedure 1ea.on
+	00	CAS CO3C2-H &OD	COD2	2, D5;D706, S1H, L1e'ati0e timeME			DC)D D12102E Hem$ora' -eriod. 1e'ating Ho -rocedure or Hhera$(
6	00	CAS CO3C2-H &OD	COD2	2, D111402, DC&, MC'inica' !indingME		)!! roB 4 0a'ue i. LC'inica' !indingM	DC)D D60++E 4rea.t C'inica' !inding or)ndicated -ro"'em
7	000	CAS -1O-21H)2S	COD2	2, D5;C171, S1H, M=atera'it(ME			DC)D D6022E Side

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
*	0	CAS -1O-21H)2S	DAH2	2, D111060, DC&, MStud(DateME			

D.4. TID 34! !4 9REAST IMAGING REPORT NARRATIVE

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CO3HA)321	2, D111412, DC&, L3arrati0e Summar(M	√		
2	0	CO3HA)3S	CO3HA)321	4C)D D60+2E 4rea.t)maging 1e$ort Section Hit'e	√		
3	00	CAS O4S CO3H2?H	)3C=#D2	DH)D D1002E O".er0er Conte7t	√		
4	00	CO3HA)3S	H2?H	4C)D D60+3E 4rea.t)maging 1e$ort 2'ement.	√		DC& 1210+* -rocedure re$orted
+	000	)3!2112D !1O&	)3C=#D2	DH)D D3+0E 1eference. to Su$$orting 20idence			

D.A. TID 3SELFTMP-:4 9REAST IMAGING SUMMAY

$his is a :rivate te2 :late re4eren+ed 3y $ID>4200?%

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CO3HA) 321	2, D121111, DC&, WSummar(WE	√		
2	0	CO3HA)3 S	H2?H	2, D121106, DC&, WCommentWE	√		
3	0	CO3HA)3 S	H2?H	2, D)12101;01, &1#S, M -rimar( )ndication.ME	√		
4	0	CO3HA)3 S	H2?H	2, D)12101;02, &1#S, M Secondar( )ndication.ME	√		
+	0	CO3HA)3 S	H2?H	2, D)12101;03, &1#S, M C-H4 CodeME	√		
6	0	CO3HA)3 S	H2?H	2, D)12101;04, &1#S, M C-H4 De.cri$tionME	√		
7	0	CO3HA)3 S	H2?H	2, D121106, &1#S, M CommentME	√		

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
*	O	CO3HA)3S	H2?H	2, D)12101;0+, &1#S, M-rom$tME	√		
6	O	CO3HA)3S	H2?H	2, D121071, &1#S, M!inding.ME	√		

D.B. TID 34! B4 9REAST IMAGING REPORT FINDING SECTION

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CO3HA)321	2, D121070, DC&, M!inding.ME	√		
2	O	CAS O4S CO3H2?H	)3C=#D2	DH)D D1002E O".er0er Conte7t			
3	O	CO3HA)3S	)3C=#D2	DH)D D4201E 4rea.t)maging -rocedure 1e$orted	√		
4	O	CO3HA)3S	COD2	DH)D DS2=!H&-;4E 412ASH)&A5)35 &ASS !)3D)35	√**(10 findings)**		
+	O	CO3HA)3S	)3C=#D2	2, DH6006;11, &1#S, M=(m$h 3ode.ME	√		
6	O	CO3HA)3S	)3C=#D2	2, DH6006;13, &1#S, MA..e..mentME	√		

D.D. TID 34! 84 9REAST IMAGING REPORT SUPPLEMENTARY DATA

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CO3HA)321	2, D111414, DC&, LSu$$'ementar(DataME	√		
2	O	CO3HA)3S	)3C=#D2	DH)D D4201E 4rea.t)maging -rocedure 1e$orted	√		
3	O	CO3HA)3S	COD2	2, D111403, DC&, M4a.e'ine .creening mammogramME			DC)D D230E /e.;3o
4	O	CO3HA)3S	COD2	2, D111404, DC&, M!ir.t			DC)D D230E

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Conditio n	Value Set Constraint
		3S	D2	&ea.urement Hem$'ate			WW=engthWW V=atera'it(Q V=atera'it(VSection Q 6016W
3	0	CO3HA) 3S	)3C=# D2	DH)D D1400E =inear &ea.urement Hem$'ate	√		WV&ea.urement Q 5;A220, S1H, WW 8 idthWW V=atera'it(Q V=atera'it(VSection Q 6016W
4	0	CO3HA) 3S	)3C=# D2	DH)D D1400E =inear &ea.urement Hem$'ate	√		WV&ea.urement Q 121207, DC&, WWCeightWW V=atera'it(Q V=atera'it(VSection Q 6016W
+	0	CO3HA) 3S	)3C=# D2	DH)D D1400E =inear &ea.urement Hem$'ate	√		WV&ea.urement Q 121242, DC&, WWDi.tance from ni$$'eWW V=atera'it(Q V=atera'it(VSection Q 6016W
6	0	CO3HA) 3S	)3C=# D2	DH)D D1400E =inear &ea.urement Hem$'ate	√		WV&ea.urement Q 121243, DC&, WWDi.tance from .9inWW V=atera'it(Q V=atera'it(VSection Q 6016W

D." . TID 3SELFTMP-B4 9REAST MASS ANALYSIS

$his is a :rivate te2 :late re4eren+ed 3y $ID >SE#@$M , -4?%

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1	0	CO3HA)3S	H2?H	2 , D&;020!6, S1H, M Sha$eME	√		
2	0	CO3HA)3S	H2?H	2 , DH6006;1, &1#S, M ContourU&arginME	√		
3	0	CO3HA)3S	H2?H	2 , DH6006;2, &1#S, MCa$.u'eME	√		
4	0	CO3HA)3S	H2?H	2 , DH6006;3, &1#S, MCeight/ 8 idthME	√		
+	0	CO3HA)3S	H2?H	2 , DH6006;4, &1#S, M2cho)n.ideDto fatME	√		
6	0	CO3HA)3S	H2?H	2 , DH6006;+, &1#S, M-o.terior 2choME	√		
7	0	CO3HA)3S	H2?H	2 , DH6006;14, &1#S, M , a.cu'arit(ME	√		
*	0	CO3HA)3S	H2?H	2 , DH6006;7, &1#S, MSurrounding Hi..ueME	√		
6	0	CO3HA)3S	H2?H	2 , DH6006;*, &1#S, M2'a.ticit(ME	√		
10	0	CO3HA)3S	H2?H	2 , DH6006;6, &1#S, MCa'cification.ME	√		

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
11	0	CO3HA)3S	H2?H	2, DH6006;10, &1#S, M&u'ti$'e Comogeneou. &a..e.ME	√		
12	0	CO3HA)3S	H2?H	2, DH6006;1+, &1#S, M1)ME	√		

D."". M$88in% 0e&/een Mo*$(i&+ ,e$s)re,en&s $n* DICOM Con'e8&s.

D.".". 9re$s& Me$s)re,en&s

&a.. =	5;A22A, S1H, =ength
&a.. 8	5;A220, S1H, 8idth
&a.. C	121207, DC&, Ceight
&a.. 3i$$'e;&a.. Di.t	121242, DC&, Di.tance from ni$$'e
&a.. S9in;&a.. Di.t	121243, DC&, Di.tance from .9in
&a.. Sha$e	&;020!6, S1H, Sha$e
&a.. Contour U &argin	H6006;1, &1#S, ContourU&argin
&a.. Ca$.u'e	H6006;2, &1#S, Ca$.u'e
&a.. Ceight/8idth	H6006;3, &1#S, Ceight/8idth
&a.. 2cho)n.ideDto fatE	H6006;4, &1#S, 2cho)n.ideDto fatE
&a.. -o.terior 2cho	H6006;+, &1#S, -o.terior 2cho
&a.. ,a.cu'arit(	H6006;14, &1#S, ,a.cu'arit(
&a.. Surrounding Hi..ue	H6006;7, &1#S, Surrounding Hi..ue
&a.. 2'a.ticit(	H6006;*, &1#S, 2'a.ticit(
&a.. Ca'cification.	H6006;6, &1#S, Ca'cification.
&a.. &u'ti$'e Comogeneou. &a..	H6006;10, &1#S, &u'ti$'e Comogeneou. &a..e.
&a.. 1)	H6006;1+, &1#S, 1)

N*teF $he 2aJi2 ' 2 *4 2ass 4indings is 10%