

Structured Report Tags

OVERVIEW

The 4DM application includes structured report templates to provide users an easy way of configuring report templates without having to create them. The default templates contain most of the necessary reporting requirements defined by the ASNC Reporting Guidelines. Data elements contained in the datasets, as well as those input into 4DM from other sources, populate 4DM reports via report tags.

HOW TO GUIDE

The 4DM report generator utilizes **Structured Report Tags** to transfer information from a patient dataset being reviewed in 4DM to the physician’s report being created for that patient. Within each 4DM report template, the tags are set-up as bracketed text (e.g. Patient Name = [PAT_NAME]). These report tags [Tables 1-18] are grouped in accordance with ASNC Guidelines. Tables 19 and 20 are 4DM specific.

The Priority column denotes the relevance of each data element, in accordance with ASNC Reporting Guidelines. Designations consist of:

- **REQUIRED**
- **Recommended**
- **Optional**
- **4DM** - these are INVIA-defined tags considered optional when evaluating a report for compliance with ASNC standards

The **4DM Version** columns indicate which versions the data element tag is available in.

REPORT TAG TABLES

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When patient information is exported as a **Text Formatted Report**, the report tags are replaced by information or values from 4DM. Use a combination of fixed text (see ❶ Figure 1) and report tags (see ❷ Figure 1) when creating a customized report.

Nuclear Medicine Myocardial Perfusion

❶ Patient Name: [PAT_NAME]	❷ Study Date: [RST_STUDY_DATE]	
Patient ID: [PAT_ID]	Referring Physician: [REF_PHYSICIAN]	
Age/Sex: [PAT_AGE] yo [PAT_SEX]	Reporting Physician: [REP_PHYSICIAN]	
Height: [PAT_HGT] [HGT_UNITS]	Weight: [PAT_WGT] [WGT_UNITS]	BSA: [PAT_BSA] m ²

INDICATIONS: [STUDY_INDICATIONS]

Table 1. Site Administrative Data

Table 1a. Site Administrative Data Tags

Variable	Report Tag	Definition	Priority	4DM Version						
				6.x	7.0	2010	2012	2013	2015	
Site ID	[SITE_ID]	Site ID for national identification	Recommended						•	•
Site of service	[SITE_FACILITY_TYPE]	Type of facility	Optional						•	•
Imaging facility address	[SITE_ADDRESS]	Imaging facility address	Recommended						•	•
Imaging facility phone number	[SITE_PHONE]	Imaging facility phone number	Recommended						•	•
Accreditation status	[SITE_ACCRED_STATUS]	Accreditation status of facility	Recommended						•	•
Accreditation entity	[SITE_ACCRED_ENTITY]	Accreditation entity	Recommended						•	•

Note: In versions prior to v2013, these items were supported by customizing the fixed text within 4DM report templates.

Table 1b. Additional 4DM Site Administrative Data Tags

Variable	Report Tag	Definition	Priority	4DM Version						
				6.x	7.0	2010	2012	2013	2015	
Site Name	[SITE_NAME]	Imaging facility name	4DM						•	•
Imaging Service	[SITE_IMAGING_SERVICE]	Imaging service	4DM						•	•
Site Logo	[SITE_LOGO]	Facility's logo image file	4DM						•	•
Free Text	[SITE_FREE_TEXT]	Free text about the facility	4DM						•	•

Note: In versions prior to v2013, these items were supported by customizing the fixed text within 4DM report templates.

Table 2. Patient Demographics

Table 2a. Patient Demographics Tags

Variable	Report Tag	Definition	Priority	4DM Version						
				6.x	7.0	2010	2012	2013	2015	
Last name	[PAT_NAME]	Patient last name	REQUIRED	•	•	•	•	•	•	•
First name	[PAT_NAME]	Patient first name	REQUIRED	•	•	•	•	•	•	•
Patient ID	[PAT_ID]	Patient unique identifier	REQUIRED	•	•	•	•	•	•	•
Patient DOB	[PAT_BDATE]	Patient date of birth	REQUIRED	•	•	•	•	•	•	•
Patient gender	[PAT_SEX]	Patient gender	REQUIRED	•	•	•	•	•	•	•
Date of Study	[STUDY_DATE]	Date of study	REQUIRED	•	•	•	•	•	•	•
Patient weight	[PAT_WGT]	Patient weight	Recommended	•	•	•	•	•	•	•
Patient height	[PAT_HGT]	Patient height	Recommended	•	•	•	•	•	•	•
Chest circumference	[CHEST_SIZE]	Chest circumference	Optional	•	•	•	•	•	•	•
Bra cup size	[BRACUP_SIZE]	Patient's bra cup size	Optional	•	•	•	•	•	•	•

Table 2. Patient Demographics (continued)

Table 2a. Patient Demographic Tags (continued)

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Patient ethnicity	[ETHNICITY]	Patient's ethnic origin	Recommended	•	•	•	•	•	•
Ordering physician	[ORD_PHYSICIAN]	Ordering physician name	REQUIRED	•	•	•	•	•	•
Interpreting/Reporting physician	[REP_PHYSICIAN]	Interp/Reporting physician name	REQUIRED	•	•	•	•	•	•
Interpreting physician board certification	<i>Part of fixed text in template</i>	Name of board that awarded certification to the physician	Recommended						
Date of interpretation	[INTERPRETATION_DATE]	Date of interpretation	REQUIRED	•	•	•	•	•	•
Date of transcription	[TRANSCRIPTION_DATE]	Date of transcription	REQUIRED	•	•	•	•	•	•

Table 2b. Additional 4DM Patient Demographic Tags

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Patient age	[PAT_AGE]	Age of patient in years	4DM	•	•	•	•	•	•
Body surface area (BSA)	[PAT_BSA]	Patient body surface area (BSA)	4DM	•	•	•	•	•	•
Body mass index (BMI)	[PAT_BMI]	Patient body mass index (BMI)	4DM	•	•	•	•	•	•
Inpatient status	[INPATIENT_STATUS]	Inpatient vs. outpatient status	4DM	•	•	•	•	•	•
Units for weight	[WGT_UNITS]	Units for weight value	4DM	•	•	•	•	•	•
Units for height	[HGT_UNITS]	Units for height value	4DM	•	•	•	•	•	•
Units for BSA	[BSA_UNITS]	Units for BSA value	4DM	•	•	•	•	•	•
Units for BMI	[BMI_UNITS]	Units for BMI value	4DM	•	•	•	•	•	•
Accession number	[ACCESSION_NUMBER]	Accession number (DICOM field)	4DM	•	•	•	•	•	•

Table 3. Clinical Information

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Indication	[STUDY_INDICATIONS]	Study indication(s) (e.g., reason for study)	REQUIRED	•	•	•	•	•	•
Pretest chest pain	[CHEST_PAIN_CLASS]	Type of chest pain	REQUIRED	•	•	•	•	•	•
Medications	[MEDICATIONS]	Medications	Recommended	•	•	•	•	•	•
Test medications	[TEST_MEDICATIONS]	Medications on day of study	Recommended	•	•	•	•	•	•
Cardiac risk factors	[CARDIAC_RISK_FACTORS]	Cardiac risk factors	Recommended	•	•	•	•	•	•
Cardiac history	[CARDIAC_HISTORY]	Cardiac history	Recommended	•	•	•	•	•	•

Table 3. Clinical Information (continued)

Variable	Report Tag	Definition	Priority	4DM Version						
				6.x	7.0	2010	2012	2013	2015	
Framingham Risk Score - patients without chest pain	<i>Not currently supported in 4DM</i>	Calculated Framingham Risk Score	Optional							
Pre-test probability of CAD - patients with chest pain	[PRE_TEST_LIKELIHOOD]	Diamond and Forrester calculated pre-test probability of CAD	Optional	•	•	•	•	•	•	•
Chest pain symptom stability	<i>Not currently supported in 4DM</i>	History of chest pain pattern	Optional							
Prior studies	<i>Not currently supported in 4DM</i>	Prior cardiac studies	Recommended							
Date of prior study	<i>Not currently supported in 4DM</i>	Date of prior cardiac studies	Recommended							
HDL cholesterol	<i>Not currently supported in 4DM</i>	HDL cholesterol level	Optional							
Total cholesterol	<i>Not currently supported in 4DM</i>	Total cholesterol level	Optional							
Appropriate use criteria	[APPROPRIATE_USE]	Appropriate use criteria indication	Recommended					•	•	
Comments	<i>Not currently supported in 4DM</i>	Comments	Optional							

Table 4. Stress Test
Table 4a. Stress Test Tags

Variable	Report Tag	Definition	Priority	4DM Version						
				6.x	7.0	2010	2012	2013	2015	
Test type	[STRESS_PROTOCOL]	Type of test	REQUIRED	•	•	•	•	•	•	•
Pharmacologic stress agent	[PHARMACEUTICAL]	Type of pharmacologic stress agent	REQUIRED	•	•	•	•	•	•	•
Indication for pharmacologic stress	[PHARMACOLOGIC_INDICATION]	Reason that exercise is not appropriate	Recommended	•	•	•	•	•	•	•
Pharmacologic stress dose	[PHARMACOLOGIC_INFUSION_DOSE]	Dose administered of pharmacologic stress agent	REQUIRED	•	•	•	•	•	•	•
Pharmacologic stress time	[PHARMACOLOGIC_INFUSION_DUR]	Total time to administer pharmacologic stress agent	REQUIRED	•	•	•	•	•	•	•
Pharmacologic stress exercise	[EXERCISE_PROTOCOL]	Exercise protocol used in conjunction with pharmacologic stress agent	REQUIRED	•	•	•	•	•	•	•
Estimated ability to exercise	<i>Not currently supported in 4DM</i>	Pre-test estimate of ability to exercise based on daily activities	Recommended							
Exercise protocol	[EXERCISE_PROTOCOL]	Exercise protocol used for stress test	REQUIRED	•	•	•	•	•	•	•
Stress heart rate (HR)	[STRESS_HR]	Maximum HR achieved during stress test	REQUIRED	•	•	•	•	•	•	•
HR response	<i>Not currently supported in 4DM</i>	HR response to exercise	Recommended							

Table 4. Stress Test (continued)

Table 4a. Stress Test Tags (continued)

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
HR recovery	<i>Not currently supported in 4DM</i>	HR recovery	Optional						
Percent (%) APMHR	[HR_AGE_PERCENT_MAX]	% Age-predicted maximum heart rate	REQUIRED	•	•	•	•	•	•
Stress blood pressure (BP)	[STRESS_BP]	Peak BP achieved during stress	REQUIRED	•	•	•	•	•	•
BP response	[BP_RESPONSE]	BP response to exercise	Recommended	•	•	•	•	•	•
Exercise duration	[EXERCISE_DURATION]	Duration of time on treadmill/bicycle	REQUIRED	•	•	•	•	•	•
Functional capacity	[EXERCISE_FUNCTIONAL_CAPACITY]	Exercise functional capacity	Recommended	•	•	•	•	•	•
Metabolic Equivalent (METS)	[EXERCISE_METS]	Peak estimated METS level	Recommended	•	•	•	•	•	•
Anginal stress symptoms	[CHEST_PAIN_SYMPTOMS]	Chest pain symptoms during stress	REQUIRED	•	•	•	•	•	•
Duration of symptoms	[CHEST_PAIN_DURATION]	Duration of anginal symptoms during stress	See note	•	•	•	•	•	•
Severity of anginal symptoms	[CHEST_PAIN_SEVERITY]	Severity of anginal symptoms during stress	See note	•	•	•	•	•	•
Other stress symptoms	[OTHER_SYMPTOMS]	Other symptoms that occurred during stress	Recommended	•	•	•	•	•	•
Reason for termination	[REASON_FOR_TERMINATION]	Reason the stress test was terminated	REQUIRED	•	•	•	•	•	•

Note: **REQUIRED** if anginal stress symptoms are present.

* Prior to v5.0, these tags were represented by STRESS_ and REST_ prefixed values (e.g., STRESS_CHEST_PAIN_SYMPTOMS, REST_CHEST_PAIN_SYMPTOMS)

Table 4b. Additional 4DM Stress Test Tags

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Stress protocol	[STRESS_PROTOCOL]	Protocol used for stress test (e.g., Adenosine stress with exercise)	4DM	•	•	•	•	•	•
Stress protocol results	[STRESS_PROTOCOL_RESULTS]	Complete description of stress protocol with hemodynamic changes	4DM	•	•	•	•	•	•
Adequacy of stress test	[STRESS_ADEQUACY]	Adequacy of stress test	4DM	•	•	•	•	•	•
Pressure rate product (PRP)	[EXERCISE_PRP]	Product of BP and HR	4DM	•	•	•	•	•	•
Exercise max stage	[EXERCISE_MAXSTAGE]	Max stage reached during exercise protocol	4DM	•	•	•	•	•	•
Exercise max stage duration	[EXERCISE_MAXSTAGE_DURATION]	Duration spent at max stage of exercise protocol	4DM	•	•	•	•	•	•
Exercise functional class	[EXERCISE_FUNCTIONAL_CLASS]	Exercise functional class (e.g., I, II, III, IV)	4DM	•	•	•	•	•	•
Pharmacologic infusion rate	[PHARMACOLOGIC_INFUSION_RATE]	Rate of administration of pharmaceutical stress agent	4DM	•	•	•	•	•	•
Pharmacologic stress exercise results	[VASO_EXER_PROTOCOL]	Complete description of pharma/exer protocol - does not include hemodynamic response	4DM	•	•	•	•	•	•

Table 4. Stress Test (continued)

Table 4b. Additional 4DM Stress Test Tags (continued)

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
HR response	[HR_CHANGE]	Change in HR from rest to stress	4DM	●	●	●	●	●	●
BP response	[BP_CHANGE]	Change in BP from rest to stress	4DM	●	●	●	●	●	●

Table 5. Resting EKG Data

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Rest HR	[REST_HR]	Resting HR	REQUIRED	●	●	●	●	●	●
Rest BP	[REST_BP]	Resting BP	REQUIRED	●	●	●	●	●	●
Rest rhythm	[REST_EKG_RHYTHMS]	Resting EKG rhythm	REQUIRED	●	●	●	●	●	●
Resting conduction	[REST_EKG_INTRAConDUCTIONS]	Resting IV conduction	REQUIRED	●	●	●	●	●	●
Resting conduction	[REST_EKG_AVBLOCKS]	Resting IV conduction (AV Blocks)	REQUIRED	●	●	●	●	●	●
Resting arrhythmias	[REST_ARRHYTHMIAS]	Resting EKG arrhythmias	REQUIRED	●	●	●	●	●	●
Repolarization	[REST_EKG_REPOLARIZATIONS]	Resting EKG repolarization	REQUIRED	●	●	●	●	●	●
Interpretable EKG	[REST_EKG_INTERPRETABLE]	Resting EKG able to be interpreted for ischemia	Recommended					●	●
Rest EKG status	[REST_EKG_STATUS]	Status of rest EKG study (e.g., not done, normal, or abnormal)	4DM	●	●	●	●	●	●

Table 6. Stress EKG Data

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Stress rhythm	[STRESS_EKG_RHYTHMS]	Stress EKG rhythm	REQUIRED	●	●	●	●	●	●
Stress conduction	[STRESS_EKG_INTRAConDUCTIONS]	Stress EKG IV conduction	Recommended	●	●	●	●	●	●
Stress conduction (AV Blocks)	[STRESS_EKG_AVBLOCKS]	Stress EKG IV conduction (AV Blocks)	Recommended	●	●	●	●	●	●
Stress arrhythmias	[STRESS_ARRHYTHMIAS]	Stress-induced EKG arrhythmias	REQUIRED	●	●	●	●	●	●
Stress repolarization	[STRESS_EKG_REPOLARIZATIONS]	Stress-induced EKG repolarization	REQUIRED	●	●	●	●	●	●
Stress ST-segment change	[ST_RESPONSE]	Stress-induced ST-segment change	REQUIRED	●	●	●	●	●	●
ST-segment location	Included in [ST_RESPONSE]	Location of ST-segment change	See note	●	●	●	●	●	●
Timing of ST-segment depression	[ST_RESPONSE_TIMING]	Time when ST-segment depression occurs	See note	●	●	●	●	●	●

Table 6. Stress EKG Data (continued)

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
ST-segment configuration	[ST_RESPONSE_CONFIG]	Configuration of ST-segment change	See note	●	●	●	●	●	●
ST-segment depression amount	Included in [ST_RESPONSE]	Millimeters of ST-segment change	See note	●	●	●	●	●	●
Maximum ST-segment change	Included in [ST_RESPONSE]	Maximum millimeters of ST-segment change	See note	●	●	●	●	●	●
Number of leads with ST-segment change	[ST_RESPONSE_NUM_LEADS]	Number of leads with ST-segment changes	See note	●	●	●	●	●	●
Exercise tolerance test - compare to prior	<i>Not currently supported in 4DM</i>	Comparison to prior ETT (METS)	Recommended						
Exercise tolerance test - compare to prior ST-segment	<i>Not currently supported in 4DM</i>	Comparison of ST-segment to prior test	Recommended						
Duke treadmill score	[DUKE_TREADMILL_SCORE]	Duke treadmill score	Recommended	●	●	●	●	●	●
Duke treadmill score prognosis	[DUKE_TREADMILL_PROGNOSIS]	Duke treadmill prognosis score	Recommended	●	●	●	●	●	●
Heart rate recovery	<i>Not currently supported in 4DM</i>	HR recovery post-stress	Recommended						
Stress EKG status	[STRESS_EKG_STATUS]	Status of stress EKG test (e.g., not done, normal, abnormal)	4DM	●	●	●	●	●	●

Note: **REQUIRED** only if ST-segment change is abnormal.

Table 7. NM Imaging
Table 7a. NM Imaging Tags

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Imaging protocol	[IMAGING_PROTOCOL]	Describes protocol used to acquire images	REQUIRED	●	●	●	●	●	●
Study acquisition	<i>Included in [IMAGING_PROTOCOL]</i>	Mode that the study was acquired in	REQUIRED (ERNA/FPRNA)			●	●	●	●
Imaging position	<i>Included in [IMAGING_PROTOCOL]</i>	Describes patient positioning	Recommended	●	●	●	●	●	●
Stress radiopharmaceutical	[STRESS_RADIOPHARMACEUTICAL]	Stress imaging agent used	REQUIRED	●	●	●	●	●	●
Stress dose	[STRESS_DOSE]	Dose of radioactivity (in mCi units)	REQUIRED	●	●	●	●	●	●
Stress date	[STR_STUDY_DATE]	Date of stress study	REQUIRED	●	●	●	●	●	●
Stress injection time	[STR_INJ_TIME]	Time of stress injection	Recommended	●	●	●	●	●	●
Stress imaging time	[STR_STUDY_TIME]	Time of stress imaging	REQUIRED	●	●	●	●	●	●
Exercise time after injection	<i>Not currently supported in 4DM</i>	Exercise time after injection	Optional						
Rest radiopharmaceutical	[REST_RADIOPHARMACEUTICAL]	Rest imaging agent used	REQUIRED	●	●	●	●	●	●
Rest dose	[REST_DOSE]	Dose of radioactivity (in mCi units)	REQUIRED	●	●	●	●	●	●

Table 7. NM Imaging (continued)

Table 7a. NM Imaging Tags (continued)

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Rest date	[RST_STUDY_DATE]	Date of rest study	REQUIRED	•	•	•	•	•	•
Rest injection time	[RST_INJ_TIME]	Time of rest injection	Recommended	•	•	•	•	•	•
Rest imaging time	[RST_STUDY_TIME]	Time of rest imaging	REQUIRED	•	•	•	•	•	•
Viability radiopharmaceutical	[DELAY_RADIOPHARMACEUTICAL]	Viability imaging agent used	REQUIRED	•	•	•	•	•	•
FDG radiopharmaceutical	[FDG_RADIOPHARMACEUTICAL]	FDG imaging agent used	REQUIRED	•	•	•	•	•	•
Viability dose	[DELAY_DOSE]	Delay dose of radioactivity (in mCi units)	REQUIRED	•	•	•	•	•	•
FDG viability dose	[FDG_DOSE]	Delay dose of FDG radioactivity (in mCi units)	REQUIRED	•	•	•	•	•	•
Viability date	[DLY_STUDY_DATE]	Date of viability study	REQUIRED	•	•	•	•	•	•
FDG viability date	FDG_STUDY_DATE	Date of FDG viability study	REQUIRED	•	•	•	•	•	•
Viability injection time	[DLY_INJ_TIME]	Time of viability injection	Recommended	•	•	•	•	•	•
FDG viability injection time	[FDG_INJ_TIME]	Time of FDG viability injection	Recommended	•	•	•	•	•	•
Viability imaging time	[DLY_STUDY_TIME]	Time of viability imaging	REQUIRED	•	•	•	•	•	•
FDG viability imaging time	[FDG_STUDY_TIME]	Time of FDG viability imaging	REQUIRED	•	•	•	•	•	•
Rest / Delayed imaging time	<i>Included in</i> [IMAGING_PROTOCOL]	Time difference between rest and delayed images	REQUIRED			•	•	•	•
Fasting state	[FASTING_STATE]	Fasting state of the patient	REQUIRED (PET only)			•	•	•	•
Attenuation correction	<i>Included in</i> [IMAGING_PROTOCOL]	Use of attenuation correction	REQUIRED	•	•	•	•	•	•
Attenuation correction type	<i>Included in</i> [IMAGING_PROTOCOL]	Type of attenuation correction	Recommended			•	•	•	•

Table 7b. Additional 4DM NM Imaging Tags

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Imaging Protocol	[STUDY_PROTOCOL_DATA]	Complete description of imaging protocol	4DM	•	•	•	•	•	•
Stress Radiation Dose	[STR_RADIATION_DOSE]	Radiation Exposure Received	4DM					•	•
Rest Radiation Dose	[RST_RADIATION_DOSE]	Radiation Exposure Received	4DM					•	•
Delay Radiation Dose	[DLY_RADIATION_DOSE]	Radiation Exposure Received	4DM					•	•
FDG Radiation Dose	[FDG_RADIATION_DOSE]	Radiation Exposure Received	4DM					•	•

Table 8. LV Perfusion Findings

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Perfusion defect location	[MYOCARDIAL_PERFUSION]	Location of perfusion defect	REQUIRED	●	●	●	●	●	●
Perfusion defect size	[MYOCARDIAL_PERFUSION]	Size of perfusion defect	REQUIRED	●	●	●	●	●	●
Perfusion defect severity	[MYOCARDIAL_PERFUSION]	Severity of perfusion defect	REQUIRED	●	●	●	●	●	●
Type of perfusion defect	[MYOCARDIAL_PERFUSION]	Perfusion defect type	REQUIRED	●	●	●	●	●	●
TCD/TID	[TID_FINDINGS]	Transient cavitory dilatation	REQUIRED	●	●	●	●	●	●
TCD/TID value	[STR_TID]	Transient cavitory dilatation ratio	Optional	●	●	●	●	●	●
Comparison to prior images LV perfusion	<i>Not currently supported in 4DM</i>	Prior image comparison	Recommended						
Prior study date	<i>Not currently supported in 4DM</i>	Date of prior study	Recommended						
Lung uptake, stress and rest	<i>Not currently supported in 4DM</i>	Lung uptake stress and rest	Optional						
Lung uptake, stress only	<i>Not currently supported in 4DM</i>	Stress lung uptake	Optional						
RV myocardial uptake, stress and rest	[RV_PERFUSION]	RV uptake stress/rest	Recommended	●	●	●	●	●	●
RV myocardial uptake, stress	[RV_PERFUSION]	RV uptake stress only	Recommended	●	●	●	●	●	●
Increased LV uptake	<i>Not currently supported in 4DM</i>	Subjective LV uptake	Optional						

Note: The [MYOCARDIAL_PERFUSION] tag provides detailed information on up to 8 different perfusion defects. Detailed information includes: type, location, size, and severity.

Table 9. LV Perfusion Quantitation
Table 9a. LV Perfusion Quantitation Tags

Variable	Report Tag	Priority	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
SSS	[SSS]	Summed stress score, 17 segment	Recommended	●	●	●	●	●	●
SRS	[SRS]	Summed rest score, 17 segment	Recommended	●	●	●	●	●	●
SDS	[SDS]	Summed difference score, 17 segment	Recommended	●	●	●	●	●	●
Stress perfusion extent in LAD	[STR_LAD_EXT]	Regional stress defect extent (% LAD involved)	Recommended	●	●	●	●	●	●
Stress perfusion extent in LCX	[STR_LCX_EXT]	Regional stress defect extent (% LCX involved)	Recommended	●	●	●	●	●	●
Stress perfusion extent in RCA	[STR_RCA_EXT]	Regional stress defect extent (% RCA involved)	Recommended	●	●	●	●	●	●
Stress perfusion extent - Total	[STR_TOT_EXT]	Regional stress defect extent (% myocardium involved)	Recommended	●	●	●	●	●	●
Rest perfusion extent in LAD	[RST_LAD_EXT]	Regional rest defect extent (% LAD involved)	Recommended	●	●	●	●	●	●
Rest perfusion extent in LCX	[RST_LCX_EXT]	Regional rest defect extent (% LCX involved)	Recommended	●	●	●	●	●	●
Rest perfusion extent in RCA	[RST_RCA_EXT]	Regional rest defect extent (% RCA involved)	Recommended	●	●	●	●	●	●
Rest perfusion extent - Total	[RST_TOT_EXT]	Regional rest defect extent (% myocardium involved)	Recommended	●	●	●	●	●	●

Table 9. LV Perfusion Quantitation (continued)

Table 9a. LV Perfusion Quantitation Tags (continued)

Variable	Report Tag	Priority	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Stress ischemia extent in LAD	[REV_LAD_EXT]	Regional reversibility defect extent (% LAD involved)	Recommended	•	•	•	•	•	•
Stress ischemia extent in LCX	[REV_LCX_EXT]	Regional reversibility defect extent (% LCX involved)	Recommended	•	•	•	•	•	•
Stress ischemia extent in RCA	[REV_RCA_EXT]	Regional reversibility defect extent (% RCA involved)	Recommended	•	•	•	•	•	•
Stress ischemia extent - Total	[REV_TOT_EXT]	Regional reversibility defect extent (% myocardium involved)	Recommended	•	•	•	•	•	•

Table 9b. Additional 4DM LV Perfusion Quantitation Tags

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Number of segments/regions in scoring overlay	[SCORES_REGIONS]	Number of segments/regions in scoring overlay	4DM	•	•	•	•	•	•
Regional stress perfusion scores per Segment	[PS _{n,N}]	<i>(n=segment number; N=total number of segments in overlay (i.e., 17, 19, or 20))</i> Regional stress perfusion scores per segment	4DM	•	•	•	•	•	•
Regional rest perfusion scores per segment	[PR _{n,N}]	<i>(n=segment number; N=total number of segments in overlay (i.e., 17, 19, or 20))</i> Regional rest perfusion scores per segment	4DM	•	•	•	•	•	•
Regional delay perfusion scores per segment	[PD _{n,N}]	<i>(n=segment number; N=total number of segments in overlay (i.e., 17, 19, or 20))</i> Regional delay perfusion scores per segment	4DM	•	•	•	•	•	•
Regional viability scores per segment	[VI _{n,N}]	<i>(n=segment number; N=total number of segments in overlay (i.e., 17, 19, or 20))</i> Regional viability scores per segment	4DM	•	•	•	•	•	•
Summed delay score	[SDlyS]	Summed delay score	4DM	•	•	•	•	•	•
Summed viability score	[SVS]	Summed viability score	4DM	•	•	•	•	•	•
Summed scar score	[SSCS]	Summed scar score	4DM	•	•	•	•	•	•
Extent of delay perfusion defect in LAD territory	[DLY_LAD_EXT]	Extent of delay perfusion defect in LAD territory	4DM	•	•	•	•	•	•
Extent of delay perfusion defect in LCX territory	[DLY_LCX_EXT]	Extent of delay perfusion defect in LCX territory	4DM	•	•	•	•	•	•
Extent of delay perfusion defect in RCA territory	[DLY_RCA_EXT]	Extent of delay perfusion defect in RCA territory	4DM	•	•	•	•	•	•
Extent of delay perfusion defect in entire myocardium	[DLY_TOT_EXT]	Extent of delay perfusion defect in entire myocardium	4DM	•	•	•	•	•	•
Extent of viability in LAD territory	[VIA_LAD_EXT]	Extent of viability in LAD territory	4DM	•	•	•	•	•	•
Extent of viability in LCX territory	[VIA_LCX_EXT]	Extent of viability in LCX territory	4DM	•	•	•	•	•	•

Table 9. LV Perfusion Quantitation (continued)

Table 9b. Additional 4DM LV Perfusion Quantitation Tags (continued)

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Extent of viability in RCA territory	[VIA_RCA_EXT]	Extent of viability in RCA territory	4DM	●	●	●	●	●	●
Extent of viability in entire myocardium	[VIA_TOT_EXT]	Extent of viability in entire myocardium	4DM	●	●	●	●	●	●

Table 10. LV Stress Functional Findings

Table 10a. LV Stress Functional Tags

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Timing of stress function images	[STRESS_IMAGE_TIMING]	Timing of LV function assessment	Recommended	●	●	●	●	●	●
Global LV function	[LV_GLOBAL_SYSTOLIC_FUNCTION]	Subjective LV function	REQUIRED	●	●	●	●	●	●
Left Ventricular Ejection Fraction (LVEF)	[STR_EF]	Calculated EF	Recommended	●	●	●	●	●	●
LV volume - subjective	[LV_VOLUME]	Subjective LV volume	Optional	●	●	●	●	●	●
End Diastolic Volume (EDV)	[STR_EDV]	EDV calculation	Optional	●	●	●	●	●	●
End Systolic Volume (ESV)	[STR_ESV]	ESV calculation	Optional	●	●	●	●	●	●
Regional wall motion	[LV_REGIONAL_WALL_MOTION]	Subjective regional wall motion	Recommended	●	●	●	●	●	●
Regional wall motion location	[LV_REGIONAL_WALL_MOTION]	Subjective regional wall motion location	Recommended	●	●	●	●	●	●
Regional wall thickening	[LV_REGIONAL_WALL_THICKENING]	Subjective regional wall thickening	Recommended			●	●	●	●
Regional wall thickening location	[LV_REGIONAL_WALL_THICKENING]	Subjective regional wall thickening location	Recommended			●	●	●	●
Regional functional summary	[LV_REGIONAL_WALL_MOTION]	Summary of regional wall motion	Recommended	●	●	●	●	●	●
Comparison to prior images	<i>Not currently supported in 4DM</i>	Prior image comparison	Recommended						

Table 10b. Additional 4DM LV Stress Functional Tags

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
LV Functional Findings	[FUNCTIONAL_FINDINGS]	Description of LV functional findings including subjective LV function, subjective LV volume, and regional wall motion.	4DM	●	●	●	●	●	●
Indexed EDV at Stress	[STR_EDVI]	Indexed ED Volume	4DM	●	●	●	●	●	●
Indexed ESV at Stress	[STR_ESVI]	Indexed ES Volume	4DM	●	●	●	●	●	●
Cardiac Output (CO) at Stress	[STR_CO]	Cardiac Output	4DM	●	●	●	●	●	●
Indexed CO at Stress	[STR_CI]	Indexed Cardiac Output	4DM	●	●	●	●	●	●
Myocardial Mass at Stress	[STR_MYOMASS]	Myocardial Mass	4DM	●	●	●	●	●	●

Table 10. LV Stress Functional Findings (continued)

Table 10b. Additional 4DM LV Stress Functional Tags (continued)

Variable	Report Tag		Definition	Priority	4DM Version					
					6.x	7.0	2010	2012	2013	2015
Peak Filling Rate (PFR) at Stress	[STR_PEAK_FILLING_RATE]		Peak Filling Rate	4DM	●	●	●	●	●	●
Peak Emptying Rate (PER) at Stress	[STR_PEAK_EMPTYING_RATE]		Peak Emptying Rate	4DM	●	●	●	●	●	●
1/3 of the LV PFR at Stress	[STR_ONETHIRDMFR]		1/3 of the left ventricular peak filing rate	4DM	●	●	●	●	●	●
LV Time to PFR at Stress	[STR_T_PEAK_FILLING_RATE]		LV Time to Peak Filling Rate	4DM	●	●	●	●	●	●
LV Time to PER at Stress	[STR_T_PEAK_EMPTYING_RATE]		LV Time to Peak Ejection Rate	4DM	●	●	●	●	●	●
Average HR during Stress imaging	[STR_IMAGING_HR]		Patients average heart rate during imaging	4DM	●	●	●	●	●	●
Summed WT score at stress	[STS_S]		Summed WT score at stress	4DM	●	●	●	●	●	●
Summed WM score at stress	[SMS_S]		Summed WM score at stress	4DM	●	●	●	●	●	●
Regional WT score at stress	[TS _{n,N}]	<i>(n=segment number; N=total number of segments in overlay (i.e., 17, 19, or 20))</i>	Regional WT scores at stress	4DM						
Regional WM score at stress	[MS _{n,N}]	<i>(n=segment number; N=total number of segments in overlay (i.e., 17, 19, or 20))</i>	Regional WM scores at stress	4DM						

Table 11. LV Rest Function Findings

Table 11a. LV Rest Functional Tags

Variable	Report Tag		Definition	Priority	4DM Version					
					6.x	7.0	2010	2012	2013	2015
Rest global LV function	[RST_LV_GLOBAL_SYSTOLIC_FUNCTION]		Subjective LV function	Optional			●	●	●	●
Rest LV EF	[RST_EF]		Calculated EF	See note	●	●	●	●	●	●
Rest LV volume subjective	[RST_LV_VOLUME]		Subjective LV volume	See note			●	●	●	●
Rest EDV	[RST_EDV]		EDV	Optional	●	●	●	●	●	●
Rest ESV	[RST_ESV]		ESV	Optional	●	●	●	●	●	●
LV Hypertrophy	<i>Not currently supported in 4DM</i>		LV Hypertrophy	Optional						
LV diastolic function – quantitative	[RST_PEAK_FILLING_RATE]		LV peak filling rate	See note	●	●	●	●	●	●
LV diastolic function – qualitative	<i>Not currently supported in 4DM</i>		Visual assessment of time-activity curve	Optional						
Rest regional wall motion	[RST_LV_REGIONAL_WALL_MOTION]		Subjective regional wall motion	Optional			●	●	●	●
Rest regional wall motion location	[RST_LV_REGIONAL_WALL_MOTION]		Subjective regional wall motion	See note			●	●	●	●
Rest regional wall thickening	[RST_LV_REGIONAL_WALL_THICKENING]		Rest subjective regional wall thickening	Optional			●	●	●	●
Rest regional wall thickening location	[RST_LV_REGIONAL_WALL_THICKENING]		Rest subjective regional wall thickening location	Optional			●	●	●	●
Rest regional functional summary	[RST_LV_REGIONAL_WALL_MOTION]		Comparison of function to imaging	Optional			●	●	●	●

Table 11. LV Rest Function Findings (continued)

Table 11a. LV Rest Functional Tags (continued)

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Rest regional functional comparison	[SR_LV_RWM_CHANGE]	Comparison of rest to stress wall motion	Optional			•	•	•	•
Comparison to prior images	<i>Not currently supported in 4DM</i>	Prior image comparison	Recommended			•	•	•	•

Note: **REQUIRED** for First Pass Radionuclide Angiography (FPRNA) or Equilibrium Radionuclide Angiocardiology (ERNA) studies. Optional for all other protocols.

Table 11b. Additional 4DM LV Rest Functional Tags

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Indexed EDV at Rest	[RST_EDVI]	LV End Diastolic Volume indexed to BSA	4DM	•	•	•	•	•	•
Indexed ESV at Rest	[RST_ESVI]	LV End Systolic Volume indexed to BSA	4DM	•	•	•	•	•	•
Cardiac Output(CO) at Rest	[RST_CO]	LV Cardiac Output	4DM	•	•	•	•	•	•
Indexed CO at Rest	[RST_CI]	LV Cardiac Output index to BSA	4DM	•	•	•	•	•	•
Myocardial Mass at Rest	[RST_MYOMASS]	Myocardial Mass	4DM	•	•	•	•	•	•
Peak Emptying Rate (PER) at Rest	[RST_PEAK_EMPTYING_RATE]	Peak Emptying Rate	4DM	•	•	•	•	•	•
1/3 of the LV PFR at Rest	[RST_ONETHIRDMFR]	1/3 of the left ventricular peak filing rate	4DM	•	•	•	•	•	•
LV Time to PFR at Rest	[RST_T_PEAK_FILLING_RATE]	LV Time to Peak Filling Rate	4DM	•	•	•	•	•	•
LV Time to PER at Rest	[RST_T_PEAK_EMPTYING_RATE]	LV Time to Peak Ejection Rate	4DM	•	•	•	•	•	•
Average HR during Rest imaging	[RST_IMAGING_HR]	Patients average heart rate during imaging	4DM	•	•	•	•	•	•
LVEF from Delay Imaging	[DLY_EF]	LVEF from Delay Imaging	4DM	•	•	•	•	•	•
EDV from Delay Imaging	[DLY_EDV]	EDV from Delay Imaging	4DM	•	•	•	•	•	•
ESV from Delay Imaging	[DLY_ESV]	ESV from Delay Imaging	4DM	•	•	•	•	•	•
Indexed EDV at Delay	[DLY_EDVI]	Indexed EDV at Delay	4DM	•	•	•	•	•	•
Indexed ESV at Delay	[DLY_ESVI]	Indexed ESV at Delay	4DM	•	•	•	•	•	•
Cardiac Output(CO) at Delay	[DLY_CO]	Cardiac Output(CO) at Delay	4DM	•	•	•	•	•	•
Indexed CO at Delay	[DLY_CI]	Indexed CO at Delay	4DM	•	•	•	•	•	•
Myocardial Mass at Delay	[DLY_MYOMASS]	Myocardial Mass at Delay	4DM	•	•	•	•	•	•
Peak Filling Rate (PFR) at Delay	[DLY_PEAK_FILLING_RATE]	Peak Filling Rate (PFR) at Delay	4DM	•	•	•	•	•	•
Peak Emptying Rate (PER) at Delay	[DLY_PEAK_EMPTYING_RATE]	Peak Emptying Rate (PER) at Delay	4DM	•	•	•	•	•	•
1/3 of the LV PFR at Delay	[DLY_ONETHIRDMFR]	1/3 of the LV PFR at Delay	4DM	•	•	•	•	•	•
LV Time to PFR at Delay	[DLY_T_PEAK_FILLING_RATE]	LV Time to PFR at Delay	4DM	•	•	•	•	•	•
LV Time to PER at Delay	[DLY_T_PEAK_EMPTYING_RATE]	LV Time to PER at Delay	4DM	•	•	•	•	•	

Table 11. LV Rest Function Findings (continued)
Table 11b. Additional 4DM LV Rest Functional Tags (continued)

Variable	Report Tag		Definition	Priority	4DM Version					
					6.x	7.0	2010	2012	2013	2015
Average HR during Delay imaging	[DLY_IMAGING_HR]		Average HR during Delay imaging	4DM	•	•	•	•	•	•
LVEF from Delay Imaging	[FDG_EF]		LVEF from Delay Imaging	4DM	•	•	•	•	•	•
EDV from Delay Imaging	[FDG_EDV]		EDV from Delay Imaging	4DM	•	•	•	•	•	•
ESV from Delay Imaging	[FDG_ESV]		ESV from Delay Imaging	4DM	•	•	•	•	•	•
Indexed EDV at Delay	[FDG_EDVI]		Indexed EDV at Delay	4DM	•	•	•	•	•	•
Indexed ESV at Delay	[FDG_ESVI]		Indexed ESV at Delay	4DM	•	•	•	•	•	•
Cardiac Output(CO) at Delay	[FDG_CO]		Cardiac Output(CO) at Delay	4DM	•	•	•	•	•	•
Indexed CO at Delay	[FDG_CI]		Indexed CO at Delay	4DM	•	•	•	•	•	•
Myocardial Mass at Delay	[FDG_MYOMASS]		Myocardial Mass at Delay	4DM	•	•	•	•	•	•
Peak Filling Rate (PFR) at Delay	[FDG_PEAK_FILLING_RATE]		Peak Filling Rate (PFR) at Delay	4DM	•	•	•	•	•	•
Peak Emptying Rate (PER) at Delay	[FDG_PEAK_EMPTYING_RATE]		Peak Emptying Rate (PER) at Delay	4DM	•	•	•	•	•	•
1/3 of the LV PFR at Delay	[FDG_ONETHIRDMFR]		1/3 of the LV PFR at Delay	4DM	•	•	•	•	•	•
LV Time to PFR at Delay	[FDG_T_PEAK_FILLING_RATE]		LV Time to PFR at Delay	4DM	•	•	•	•	•	•
LV Time to PER at Delay	[FDG_T_PEAK_EMPTYING_RATE]		LV Time to PER at Delay	4DM	•	•	•	•	•	•
Average HR during Delay imaging	[FDG_IMAGING_HR]		Average HR during Delay imaging	4DM	•	•	•	•	•	•
Summed WT score at rest	[STS_R]		Summed thickening score at rest.	4DM	•	•	•	•	•	•
Summed WT score at delay	[STS_D]		Summed thickening score at delay.	4DM	•	•	•	•	•	•
Summed WM score at rest	[SMS_R]		Summed motion score at rest.	4DM	•	•	•	•	•	•
Summed WM score at delay	[SMS_D]		Summed motion score at delay.	4DM	•	•	•	•	•	•
Regional WT scores at rest	[TR _{n,N}]	<i>(n=segment number; N=total number of segments in overlay (i.e., 17, 19, or 20))</i>	Regional WT scores at rest	4DM						
Regional WT scores at delay	[TD _{n,N}]	<i>(n=segment number; N=total number of segments in overlay (i.e., 17, 19, or 20))</i>	Regional WT scores at delay	4DM						
Regional WM scores at rest	[MR _{n,N}]	<i>(n=segment number; N=total number of segments in overlay (i.e., 17, 19, or 20))</i>	Regional WM scores at rest	4DM						
Regional WM scores at delay	[MD _{n,N}]	<i>(n=segment number; N=total number of segments in overlay (i.e., 17, 19, or 20))</i>	Regional WM scores at delay	4DM						

Table 12. Miscellaneous

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Overall study quality	[OVERALL_STUDY_QUALITY]	Overall quality of the study	REQUIRED	•	•	•	•	•	•
Study quality/artifacts	[STUDY_ARTIFACTS]	Specific problems	Recommended	•	•	•	•	•	•
Extracardiac activity	[EXTRA_CARD_ACTIVITY]	Describe extracardiac activity	Recommended	•	•	•	•	•	•
Incidental findings	<i>Not currently supported in 4DM</i>	Describe any incidental findings	Optional						
Regional SUV Statistics	[REGIONAL_SUV_DATA]	Regional Standard Uptake Value Statistics	4DM					•	•
Result Communication	[RESULT_COMMUNICATION]	Communication of results with referring physician. Sample Text output "Dr. Jane Doe was contacted on dd-MMM-yyyy at hh:mm[:ss] with these results."	4DM					•	•

Table 13. RV Perfusion Findings

Table 13a. RV Perfusion Tags

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
RV perfusion	[RV_PERFUSION]	Subjective RV perfusion	Optional	•	•	•	•	•	•
Global RV function	[RV_GLOBAL_SYSTOLIC_FUNCTION]	Subjective RV function	See note	•	•	•	•	•	•
	[RST_RV_GLOBAL_SYSTOLIC_FUNCTION]					•	•	•	•
RV EF	[RV_EF]	Calculated EF	Optional			•	•	•	•
	[RST_RV_EF]					•	•	•	•
RV volume subjective	[RV_VOLUME]	Subjective LV volume	See note	•	•	•	•	•	•
	[RST_RV_VOLUME]					•	•	•	•
RV EDV	[RV_EDV]	Quantitative RV end diastolic volume	Optional			•	•	•	•
	[RST_RV_EDV]					•	•	•	•
RV ESV	[RV_ESV]	Quantitative RV end systolic volume	Optional			•	•	•	•
	[RST_RV_ESV]					•	•	•	•
RV regional wall motion	[RV_REGIONAL_WALL_MOTION]	Subjective regional wall motion	Optional	•	•	•	•	•	•
	[RST_RV_REGIONAL_WALL_MOTION]					•	•	•	•
RV regional wall motion summary	[RV_REGIONAL_WALL_MOTION]	Comparison of function to imaging	Optional	•	•	•	•	•	•
	[RST_RV_REGIONAL_WALL_MOTION]					•	•	•	•

Note: **REQUIRED** for First Pass Radionuclide Angiography (FPRNA) or Equilibrium Radionuclide Angiocardiology (ERNA) studies. Optional for all other protocols.

Table 13. RV Perfusion Findings (continued)

Table 13b. Additional 4DM RV Perfusion Tags

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
RV regional wall thickening at Stress	RV_REGIONAL_WALL_THICKENING]	Subjective regional wall thickening at Stress	4DM			•	•	•	•
RV regional wall thickening at Rest	RST_RV_REGIONAL_WALL_THICKENING]	Subjective regional wall thickening at Rest	4DM			•	•	•	•
RV regional wall thickening summary at Stress	[RV_REGIONAL_WALL_THICKENING]	Comparison of function to imaging at Stress	4DM			•	•	•	•
RV regional wall thickening summary at Rest	[RST_RV_REGIONAL_WALL_THICKENING]	Comparison of function to imaging at Rest	4DM			•	•	•	•
RV Time to Peak Filling Rate at Stress	<i>Not currently supported in 4DM</i>	RV Time to Peak Filling Rate at Stress	4DM						
RV Time to Peak Filling Rate at Rest	<i>Not currently supported in 4DM</i>	RV Time to Peak Filling Rate at Rest	4DM						
RV Time to Peak Emptying Rate at Stress	<i>Not currently supported in 4DM</i>	RV Time to Peak Emptying Rate at Stress	4DM						
RV Time to Peak Emptying Rate at Rest	<i>Not currently supported in 4DM</i>	RV Time to Peak Emptying Rate at Rest	4DM						

Table 14. FPRNA/ERNA Findings/Impressions

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Right atrial size	<i>Not currently supported in 4DM</i>	Visual assessment of RA size	Optional						
Left atrial size	<i>Not currently supported in 4DM</i>	Visual assessment of LA size	Optional						
Aortic size	<i>Not currently supported in 4DM</i>	Size of aorta	Optional						
Pulmonary artery size	<i>Not currently supported in 4DM</i>	Size of pulmonary artery	Optional						
Qualitative change in LV size – change from exercise to rest	<i>Not currently supported in 4DM</i>	Visual assessment of change from rest LV size with exercise	Optional						
Quantitative change in LV size – change from exercise to rest	[SR_LV_SIZE_CHANGE_Q]	Quantitative assessment of change from rest LV size with exercise	See note #1			•	•	•	•
Qualitative change in RV size – change from exercise to rest	<i>Not currently supported in 4DM</i>	Visual assessment of change from rest RV size with exercise	Optional						
LV regional wall motion – change from rest	[SR_LV_RWM_CHANGE]	LV regional wall motion – change from rest	See note #2			•	•	•	•
RV regional wall motion – change from rest	[SR_RV_RWM_CHANGE]	RV regional wall motion – change from rest	See note #2			•	•	•	•

Note #1: Recommended for First Pass Radionuclide Angiography (FPRNA) or Equilibrium Radionuclide Angiocardiology (ERNA) studies. Optional for all other protocols.

Note #2: **REQUIRED** for First Pass Radionuclide Angiography (FPRNA) or Equilibrium Radionuclide Angiocardiology (ERNA) studies. Optional for all other protocols.

Table 15. Viability Overall Findings

Variable	Report Tag	Definition	Priority	4DM Version						
				6.x	7.0	2010	2012	2013	2015	
LV Size	<i>Not currently supported in 4DM</i>	Cavity size	Recommended							
RV Size	<i>Not currently supported in 4DM</i>	Cavity size	Recommended							
Lung uptake	<i>Not currently supported in 4DM</i>	Lung uptake	Recommended							
Increased LV uptake	<i>Not currently supported in 4DM</i>	Subjective LV uptake	Optional							
Blood Pool activity	<i>Not currently supported in 4DM</i>	Blood pool activity	Recommended							
Metabolism defect location	Included in [MYOCARDIAL_PERFUSION]	Location of metabolism defect	REQUIRED	•	•	•	•	•	•	•
Perfusion / metabolism mismatch	Included in [MYOCARDIAL_PERFUSION]	Is there a mismatched perfusion / metabolism defect?	REQUIRED	•	•	•	•	•	•	•
Perfusion / metabolism mismatch size	Included in [MYOCARDIAL_PERFUSION]	Size of the perfusion / metabolism mismatch	REQUIRED	•	•	•	•	•	•	•
Perfusion / metabolism mismatch location	Included in [MYOCARDIAL_PERFUSION]	Location of perfusion/ metabolism mismatch	REQUIRED	•	•	•	•	•	•	•
Perfusion / metabolism match	Included in [MYOCARDIAL_PERFUSION]	Is there a matched perfusion / metabolism defect?	REQUIRED	•	•	•	•	•	•	•
Perfusion / metabolism match size	Included in [MYOCARDIAL_PERFUSION]	Size of the perfusion / metabolism match	REQUIRED	•	•	•	•	•	•	•
Perfusion / metabolism match location	Included in [MYOCARDIAL_PERFUSION]	Location of perfusion/ metabolism match	REQUIRED	•	•	•	•	•	•	•
Comparison to prior images LV viability	<i>Not currently supported in 4DM</i>	Prior image comparison	Recommended							
Prior study date	<i>Not currently supported in 4DM</i>	Date of prior study	Recommended							

Note: The information in this table may be repeated as required to describe multiple metabolism defects.

Table 16. Viability Quantification Findings

Variable	Report Tag	Definition	Priority	4DM Version						
				6.x	7.0	2010	2012	2013	2015	
Number of viable segments	<i>Not currently supported in 4DM</i>	The number of 17-segment that are viable	Optional							
Metabolism defect extent	<i>Not currently supported in 4DM</i>	Regional metabolism defect extent (% myocardium involved)	Optional							
Perfusion / metabolism mismatch extent	<i>Not currently supported in 4DM</i>	Extent of perfusion / metabolism mismatch (% of rest perfusion defect)	Optional							
Perfusion / metabolism match extent	<i>Not currently supported in 4DM</i>	Extent of perfusion / metabolism match (% of rest perfusion defect)	Optional							

Table 17. Overall Findings/Summaries

Table 17a. Overall Summary Tags

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Number of diseased vessels	[VESSEL_DISEASE]	Number of diseased vessel territories	Optional	•	•	•	•	•	•
Diseased vessels	<i>Not currently supported in 4DM</i>	Diseased vessels	Optional						
Stress test summary	[STRESS_TEST_SUMMARY]	Summary of stress results	Recommended	•	•	•	•	•	•
LV Perfusion summary	[LV_FINDINGS_SUMMARY]	Summary of LV perfusion	REQUIRED	•	•	•	•	•	•
LV Function summary	[LV_FINDINGS_SUMMARY]	Summary of LV function	REQUIRED	•	•	•	•	•	•
LV Viability summary	[LV_FINDINGS_SUMMARY]	Summary of LV viability	REQUIRED (for viability)	•	•	•	•	•	•
RV Perfusion summary	[RV_FINDINGS_SUMMARY]	Summary of RV perfusion	Optional	•	•	•	•	•	•
RV Function summary	[RV_FINDINGS_SUMMARY]	Summary of RV function	REQUIRED (for FPRNA/ERNA)	•	•	•	•	•	•
Prior imaging studies	[COMP_SUMMARY]	Integration of prior imaging study results	Optional	•	•	•	•	•	•
Scan significance	[SCAN_SIGNIFICANCE]	Significance of perfusion results	Recommended	•	•	•	•	•	•
Signature	<i>Part of Template</i>	Signature of interpreting MD	REQUIRED	•	•	•	•	•	•
Electronic signature	[REP_PHYSICIAN_SIGNATURE]	Electronic signature of interpreting MD	REQUIRED					•	•
Date signed	<i>Part of Template</i>	Date of final signature	REQUIRED	•	•	•	•	•	•

Table 17b. Additional 4DM Overall Summary Tags

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
State of report	[DATA_STATE]	State of report	4DM	•	•	•	•	•	•
Event Risk Summary	[EVENT_RISK_SUMMARY]	Event Risk Summary	4DM	•	•	•	•	•	•

Table 18. CT Findings

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Scanner Type, CT Imaging Position, kV, mAs, Contrast Volume, Contrast Rate and Infusion Start Time are summarized.	[CT_ACQ_PROTOCOL]	Scanner Type, CT Imaging Position, kV, mAs, Contrast Volume, Contrast Rate and Infusion Start Time are summarized.	4DM	•	•	•	•	•	•
Brief description of CT Incidental findings. This is automatically generated from Incidental Findings in CT Findings/Impressions.	[CT_INCIDENTAL_FINDINGS]	Brief description of CT Incidental findings. This is automatically generated from Incidental Findings in CT Findings/Impressions.	4DM	•	•	•	•	•	•

Table 18. CT Findings (continued)

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Brief description of CT total calcium scores.	[CASC_REGIONAL_FINDINGS]	Brief description of CT total calcium scores.	4DM	•	•	•	•	•	•
Brief description of calcium scoring findings. This is automatically generated from CaSc findings summary box.	[CASC_SUMMARY_FINDINGS]	Brief description of calcium scoring findings. This is automatically generated from CaSc findings summary box.	4DM	•	•	•	•	•	•
Total number of lesions in the LM artery	[CASC_LM_LESIONS]	Total number of lesions in the LM artery	4DM	•	•	•	•	•	•
Total volume of calcium in the LM artery	[CASC_LM_VOL]	Total volume of calcium in the LM artery	4DM	•	•	•	•	•	•
Total Agatston calcium score in the LM artery	[CASC_LM_SCORE]	Total Agatston calcium score in the LM artery	4DM	•	•	•	•	•	•
Total number of lesions in the LAD artery	[CASC_LAD_LESIONS]	Total number of lesions in the LAD artery	4DM	•	•	•	•	•	•
Total volume of calcium in the LAD artery	[CASC_LAD_VOL]	Total volume of calcium in the LAD artery	4DM	•	•	•	•	•	•
Total Agatston calcium score in the LAD artery	[CASC_LAD_SCORE]	Total Agatston calcium score in the LAD artery	4DM	•	•	•	•	•	•
Total number of lesions in the LCx artery	[CASC_LCX_LESIONS]	Total number of lesions in the LCx artery	4DM	•	•	•	•	•	•
Total volume of calcium in the LCx artery	[CASC_LCX_VOL]	Total volume of calcium in the LCx artery	4DM	•	•	•	•	•	•
Total Agatston calcium score in the LCx artery	[CASC_LCX_SCORE]	Total Agatston calcium score in the LCx artery	4DM	•	•	•	•	•	•
Total number of lesions in the RCA artery	[CASC_RCA_LESIONS]	Total number of lesions in the RCA artery	4DM	•	•	•	•	•	•
Total number of lesions in the RCA artery	[CASC_RCA_LESIONS]	Total number of lesions in the RCA artery	4DM	•	•	•	•	•	•
Total volume of calcium in the RCA artery	[CASC_RCA_VOL]	Total volume of calcium in the RCA artery	4DM	•	•	•	•	•	•
Total Agatston calcium score in the RCA artery	[CASC_RCA_SCORE]	Total Agatston calcium score in the RCA artery	4DM	•	•	•	•	•	•
Total number of lesions in the left ventricle	[CASC_TOT_LESIONS]	Total number of lesions in the left ventricle	4DM	•	•	•	•	•	•

Table 18. CT Findings (continued)

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Total volume of calcium in the Left ventricle	[CASC_TOT_VOL]	Total volume of calcium in the Left ventricle	4DM	•	•	•	•	•	•
Total Agatston calcium score in the Left ventricle	[CASC_TOT_SCORE]	Total Agatston calcium score in the Left ventricle	4DM	•	•	•	•	•	•
Brief description of CT findings. This is automatically generated from CT Findings Summary.	[CT_SUMMARY]	Brief description of CT findings. This is automatically generated from CT Findings Summary.	4DM	•	•	•	•	•	•
Estimated 25th percentile of Coronary Artery Calcium by Age, Gender, and Race/Ethnicity	[CASC_PERCENT_25]	Estimated 25th percentile of Coronary Artery Calcium by Age, Gender, and Race/Ethnicity	4DM				•	•	•
Estimated 50th percentile of Coronary Artery Calcium by Age, Gender, and Race/Ethnicity	[CASC_PERCENT_50]	Estimated 50th percentile of Coronary Artery Calcium by Age, Gender, and Race/Ethnicity	4DM				•	•	•
Estimated 75th percentile of Coronary Artery Calcium by Age, Gender, and Race/Ethnicity	[CASC_PERCENT_75]	Estimated 75th percentile of Coronary Artery Calcium by Age, Gender, and Race/Ethnicity	4DM				•	•	•
Estimated 90th percentile of Coronary Artery Calcium by Age, Gender, and Race/Ethnicity	[CASC_PERCENT_90]	Estimated 90th percentile of Coronary Artery Calcium by Age, Gender, and Race/Ethnicity	4DM				•	•	•

Table 19. Coronary Flow Reserve

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Stress Myocardial BloodFlow	[STR_MBF_LAD]	Regional Stress Myocardial Blood Flow (ml/min/g in LAD)	4DM			•	•	•	•
Stress Myocardial BloodFlow	[STR_MBF_LCX]	Regional Stress Myocardial Blood Flow (ml/min/g in LCX)	4DM			•	•	•	•
Stress Myocardial BloodFlow	[STR_MBF_RCA]	Regional Stress Myocardial Blood Flow (ml/min/g in RCA)	4DM			•	•	•	•
Stress Myocardial BloodFlow	[STR_MBF_TOT]	Regional Stress Myocardial Blood Flow (ml/min/g in TOT)	4DM			•	•	•	•
Rest Myocardial BloodFlow	[RST_MBF_LAD]	Regional Rest Myocardial Blood Flow (ml/min/g in LAD)	4DM			•	•	•	•
Rest Myocardial BloodFlow	[RST_MBF_LCX]	Regional Rest Myocardial Blood Flow (ml/min/g in LCX)	4DM			•	•	•	•
Rest Myocardial BloodFlow	[RST_MBF_RCA]	Regional Rest Myocardial Blood Flow (ml/min/g in RCA)	4DM			•	•	•	•
Rest Myocardial BloodFlow	[RST_MBF_TOT]	Regional Rest Myocardial Blood Flow (ml/min/g in TOT)	4DM			•	•	•	•
Coronary Flow Reserve	[CFR_LAD]	Regional Coronary Flow Reserve (ml/min/g in LAD)	4DM			•	•	•	•

Table 19. Coronary Flow Reserve (continued)

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
Coronary Flow Reserve	[CFR_LCX]	Regional Coronary Flow Reserve (ml/min/g in LCX)	4DM			•	•	•	•
Coronary Flow Reserve	[CFR_RCA]	Regional Coronary Flow Reserve (ml/min/g in RCA)	4DM			•	•	•	•
Coronary Flow Reserve	[CFR_TOT]	Regional Coronary Flow Reserve (ml/min/g in TOT)	4DM			•	•	•	•
Regional Stress Myocardial Blood Flow per Segment	[STR_MBF _{n,N}]	<i>(n=segment number; N=total number of segments in overlay (i.e., 17, 19, or 20))</i> Regional Stress Myocardial Blood Flow per Segment	4DM			•	•	•	•
Regional Rest Myocardial Blood Flow per Segment	[RST_MBF _{n,N}]	<i>(n=segment number; N=total number of segments in overlay (i.e., 17, 19, or 20))</i> Regional Rest Myocardial Blood Flow per Segment	4DM			•	•	•	•
Coronary Flow Reserve per Segment	[CFR _{n,N}]	<i>(n=segment number; N=total number of segments in overlay (i.e., 17, 19, or 20))</i> Coronary Flow Reserve per Segment	4DM			•	•	•	•

Table 20. Image Slices

Variable	Report Tag	Definition	Priority	4DM Version					
				6.x	7.0	2010	2012	2013	2015
3SA Image Object for Stress Studies	[STRESS_IMAGE1]	Path to file of montage of images from the stress study.	4DM	•	•	•	•	•	•
3SA Image Object for Rest Studies	[REST_IMAGE1]	Path to file of montage of images from the rest study.	4DM	•	•	•	•	•	•
3SA Image Object for Delay Studies	[DELAY_IMAGE1]	Path to file of montage of images from the delay study.	4DM	•	•	•	•	•	•
3SA Image Object for FDG Studies	[FDG_IMAGE1]	Path to file of montage of images from the FDG study.	4DM	•	•	•	•	•	•