

eHealth Ontario

Ontario Diagnostic Imaging Terminology Guidelines

Editorial Guidelines, Guiding Principles and Mapping Guidelines
for the Ontario Diagnostic Imaging (ON DI) Terminology Set

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Introduction

This document provides a high level view of the guidelines to be used to support mapping of local terms to the Ontario DI Terminology Set. In addition, the document covers the Guiding Principles and Editorial Guidelines for the creation of the ON DI Terms. The ON DI Terminology Set is also mapped to SNOMED CT.

These guidelines were created by a Clinical Working group comprising clinicians, eHealth Ontario Terminology and Diagnostic Imaging subject matter experts. Local site procedure terms were mapped without alteration as such several rule variances and exceptions will apply.

The Ontario DI Terminology Project was launched to provide the terminology products for the Ontario Diagnostic Imaging Common Service (ON DI CS). In the absence of a pan-Canadian and Ontario DI Terminology Set, legacy electronic patient record systems (e.g. Radiology Information Systems (RIS), Health Information Systems (HIS), Picture Archiving and Communication Systems (PACS)) which contribute information to each DI repository in Ontario today, use existing locally developed terms to express and encode key information. This includes the procedures and anatomical sites needed to identify imaging studies and reports. The use of different terminology by RIS, HIS and PACS to encode imaging procedures leads to problems with discovery and retrieval of relevant previous images and reports in a Diagnostic Imaging-repository (DI-r). Incorrect or inconsistent implementation of terminology concepts leads to discrepancies in the categorization of information within the repository, thereby challenging the effective health system use of large volume, multiple diagnostic imaging system records outside of local hospitals and regional repositories.

Consistent representation of information is needed for users to reliably find and retrieve diagnostic images and procedure reports as well as to provide a consistent display of procedure description information retrieved from repositories to clinicians at the point of service.

To achieve a consistent representation of information within the region and across the province supporting semantic interoperability, it is necessary to use standardized terminology. SNOMED CT is the terminology that will be used by eHealth Ontario in the DI Common Service to support the retrieval of diagnostic imaging results in the form of procedure reports and images.

Ontario Diagnostic Imaging Terminology Set

Purpose

To support the sharing of DI information electronically between providers and consumers of DI results, there is a need to improve upon the ability to electronically discover and retrieve information stored in any of the ON Diagnostic Imaging-repositories.

A standardized terminology set has been created to support the eHealth Ontario Diagnostic Imaging Program, specifically the Ontario Diagnostic Imaging Common Service initiative.

The purpose of the DI Common Service initiative is to enhance the delivery of patient care in Ontario by building on the successes of regional DI initiatives to provide comprehensive secure access to a patient's provincial longitudinal DI record from anywhere and at any time, within the context of a provincial electronic health record.

The DI Common Service initiative supports the sharing and viewing of diagnostic images and reports across Ontario, not just within the originating region, to hospital- and community-based providers. It does so in the following ways:

through the orchestration of the “discovery” of a patient’s DI record across all Ontario DI repositories;

through the orchestration of the “delivery” of data from a DI-r to the requesting point of service.

The ON DI Terminology Set is intended to resolve differences in non-standardized, hospital-defined terminologies currently in use and thereby:

Convey a consistent view of standard terminology to healthcare practitioners for querying reports and images across Ontario.

Help healthcare practitioners select relevant prior exams based on DI terminology

Target Audience

Users of ON DI Terminology Set including, but not limited to:

- All clinicians using the DI Common Service to review DI reports and images through various access channels including portals, EMRs, and local PACS.

Scope of the ON DI Terminology Set

The Scope of the ON DI Terminology Set drives the criteria for what is included in the ON DI Terminology Set and what can be added to the ON DI Terminology Set in future. DI procedure terms included in the ON DI Terminology Set are:

- Created to support sharing of images and reports;
- Represent DI procedures that are sent to ON DI-r's;
- Mapped according to the terminology mapping rules determined by the ON DI Terminology Clinical Work Group to ensure alignment between the Ontario DI terms and SNOMED CT.

Out of scope of the ON DI Terminology Set

DI Procedure Terms that are based on the following will not be included in the ON DI Terminology Set:

- MIS Workload
- OHIP Billing
- Data Mining
- Research codes
- Supply codes

Ontario DI Terminology Set Editorial Guidelines

- Given the many possible descriptions in use across the province and in an effort to ensure consistency of representation in the creation of the Ontario DI terms, the following editorial guidelines apply and are to be followed when maintaining the Terminology Set:
-
- The style of representation must be consistent. This requires that consistent common representations for procedures of each modality be established. There are many facets of the description to consider - for instance word order, the use of prepositions, suffixes and plurals.
-
- Each facet of a procedure that could potentially be represented in a procedure description is described in the following sections.

Table 1: Editorial Guidelines

E.#	Editorial Guideline	Description / Explanation	Comments	Exceptions and Examples
E.1	Body Part	All DI procedures should have a target 'Site' for imaging, whether this is a discrete body part or an anatomical subsection. However, there are instances which will not ordinarily identify a specific target site in the description. (see exceptions) Please refer to the Mapping section (6) for specific guidelines for different body parts	1. There are a number of procedures where the multitude of potential target sites makes it impractical to pre-coordinate all the possible combinations. For example, CT Biopsy. 2. Vessels should have a descriptive term that identifies the vessel or portion of the vessel being examined.	Examples: 1. In these cases the generic description CT biopsy will be used 2. Terms such as splenic, hepatic, renal are descriptive terms of vessels. Exception: For the modality of Mammography, Mammo will be used and not Mammo Breast as the body part breast is implied in the modality.
E.2	Procedure	Procedures in Diagnostic Imaging may include descriptions that are used by the site for business requirements or as a means to communicate between referring physicians/department, suspected pathology, patient condition, and time of procedure.	Timing/condition specific examinations should not be included. The pathology/morphology will be excluded from the description. Patient condition, pathology, or procedure time will not be used in the ON DI Term description.	Examples of patient condition or Pathology: - MR Head Claustrophobic maps to MR Head - MR Cord Compression maps to MR Spine - CT Renal Colic maps to CT Abdomen - CT Temporal lobe Epilepsy map to CT Temporal Bone - US Allen's Test map to US Wrist - CT Pulmonary Embolism map to CT Chest - US lower leg DVT map to US Lower Extremity or US Lower Extremity Venous Doppler Examples of procedure time: - Fluoro 15 min map to RF Fluoroscopy - MR Head 30 min map to MR Head
E.3	Laterality	Laterality provides information on whether the procedure being performed on a body site is on the left, right, both sides, or none of these for mid-line structures. Laterality will be pre-coordinated for appropriate body sites in the descriptions. Ontario DI Laterality in the Terminology Set will include 4 descriptive states:	Laterality is always expressed at the end of the ON DI Term description and expressed as Left, Right or Bilateral (for both). Plural forms are only used in specific circumstances and listed under the Editorial Guidelines for Plurality. Certain body parts do not	Example: - MRI Knees maps to MRI Knee Bilateral. - MR Knee L or Lt maps to MR Knee Left - MR Knee R or Rt maps to MR Knee Right Exception: - Invasive procedures may not have laterality. Drainage procedures are an example – CT Drainage.

E.#	Editorial Guideline	Description / Explanation	Comments	Exceptions and Examples
		1. Body part only (laterality not specified) 2. Bilateral 3. Left 4. Right	require laterality to be included in the ON DI Term because they are typically imaged as a paired structure.	'Bilateral' term not required when imaging is always performed on a paired structure. Example: • CT Adrenals • CT Kidneys • CT Temporal Bones • CT Temporomandibular Joints • MR Kidneys • US Thyroid • US Carotid Artery Doppler • XR Orbits • XR Zygomatic Arches
E.4	Contrast	Diagnostic Imaging invasive procedures may or may involve the use of contrast. Procedures without mention of contrast are not implied to be without contrast i.e. Echocardiography with Saline maps to US Echocardiography Doppler. Types of invasive procedures include: • Angiography • Arthrography • Aspiration • Biopsy • Colonoscopy • Drainage • Embolization • Injection • Sinography Contrast will be included in the ON DI Term when implicitly stated Example: 1. with Contrast (e.g. "CT Head with Contrast") "With and without contrast" (e.g. a CT Head with and without contrast) maps to a single procedure "with contrast". Dual Phase, Triphasic and Quad Phase and Enhanced all mean the use of contrast and will not be included in the ON DI Term but will be indicated as "with contrast".	Please see exceptions/examples corresponding to each comment number. 1. The term Angiography implies "with contrast" in all modalities except MR. 2. Use of contrast via a route other than intravascular will be explicitly specified e.g. intrathecal contrast. 3. Local terms implying the use of contrast, using the description 'enhanced' in the term maps to 'with contrast'. 4. Local Terms inferring procedures without contrast using the description 'unenhanced' in the term maps to base procedure terms. 5. Dual Phase, Triphasic and Quad Phase and Enhanced all mean the use of contrast and will not be included in the ON DI Term but will be indicated as "with contrast".	1. Exception: MR Angiography where delineation of the blood vessels can be accomplished by other means. In these cases when contrast is utilized it must also be specified in the description. 2. Exception: Arthrography procedures where use of contrast is implicit in the procedure where the contrast is injected directly into the joint. Example 6: • US Saline Bubble for Echocardiography maps to US Echocardiography • US Saline Infusion for hysterosonography maps to US Hysterosonography Example 7: • RF Upper GI with Contrast maps to RF Upper GI Example 8: • Head MR with gadolinium maps to MR Head with contrast • The local term 'Barium' maps to contrast

E.#	Editorial Guideline	Description / Explanation	Comments	Exceptions and Examples
			6. Ultrasound presently has limited contrast procedures using saline as the contrast agent. Ultrasound procedures as listed above using saline for contrast will map directly to the procedure without a contrast description. 7. Use of contrast is implied in RF Upper GI procedures and does not require “with contrast” to be added in the ON DI term. 8. Contrast should always be described in a generic representation rather than the brand name or the substance used	
E.5	Body Part in Aspirations and Injections	Coarse Body Part is used in Aspiration and Injection procedure descriptions where local sites have not provided a specific body part. No body part description will be added where the body is implied. A body part description will not be added where the body part may be very unique to a local site and not used by any other site in the province.	List of coarse body parts to be used: • Upper/Lower extremity • Head • Neck • Spine • Chest • Abdomen • Pelvis	Examples: • RF Epidural Injection maps to RF Spine Injection • US Leg Injection Left maps to US Lower extremity Left Exception: Body part and aspiration is implied in the following procedure descriptions: • Paracentesis • Thoracentesis • Pericardiocentesis Example: RF Pericardial Tap maps to RF Percardiocentesis • Components of the lower and upper extremities are mapped to the less granular description in all modalities. Example: RF Wrist Injection maps to RF Upper Extremity Injection

E.#	Editorial Guideline	Description / Explanation	Comments	Exceptions and Examples
E.6	Multiple Body Part Procedures	Multiple body part procedures include two or more body parts of the same region including organs, musculoskeletal or bony structures. These maps together by the corresponding generic parent body part area. Generic body regions include: • Upper Extremity • Lower Extremity • Head • Neck • Spine • Chest • Abdomen • Pelvis	Generic body parts refer to the less granular body region. Parent body part refers to the highest level of classification for a body part or region. Small body part refers to the more granular level. Guidelines related to specific body part and modality rules are listed under the mapping guidelines.	Examples: • CT IAC and Posterior Fossa = CT Head • Ultrasound of Spleen and Pancreas maps to US Abdomen • CT scan of Mastoid sinuses maps to CT Mastoid • X-ray of Knee Ankle and Foot maps to XR Lower Extremity Exceptions: • In the modality XR, parts of the head are mapped separately (Nasal bones + mandible + orbits cannot be mapped to XR Head. This maps to: XR Nasal Bones Mandible Orbits) • Spine terms are mapped to the less granular Spine description when there are 3 or more segments in a procedure description for all modalities except XR • In the modality XR Spine terms are mapped separately • Wrist Scaphoid combinations are mapped as stated i.e. XR Wrist Scaphoid Examples of multiple parent body parts and smaller body part mapping: • Multiple parent body parts = map as indicated Example: CT Head + Abdomen + Pelvis = CT Head Abdomen Pelvis • Multiple small parts from varying body regions: CT Liver + Spleen + Thoracic Spine + Lumbar Spine + Pelvis = CT Abdomen Pelvis Spine • Parent + multiple smaller body parts from another region = map to parent regions Example: MR Head + Cervical Spine + Thoracic Spine + Lumbar Spine = MR Head

E.#	Editorial Guideline	Description / Explanation	Comments	Exceptions and Examples
				Spine
E.7	Combined Modality Procedures	In combined modality procedures the intent of the procedure will determine the main modality used, hereafter referred to as the “dominant” modality. Refer to the PACS source modality from the local site if provided. Imaging techniques included with another modality maps to the dominant modality.		Examples: • XA PICC Line Insertion and US Upper Extremity maps to XA PICC Line. • US Breast Biopsy and Mammography maps to US Breast Biopsy • Mammo Core Biopsy US maps to Mammo Biopsy
E.8	Administrative Procedures	Only clinical aspects related to the technique of the procedure will be mapped. Other factors which are necessary to support the business of the individual clinical imaging departments such as “location”, “report status” and “visit” are excluded. Procedures maps to the modality in the ON DI Terminology Set without consideration of location for local sites. Some examples of terms that would not be permitted are: • ‘in the OR’ • Portable (‘P’ or Port) • Endoscopy • Interventional During the lifecycle of a procedure it can have many statuses including: • Requested • Completed • Scheduled • Reported • Cancelled • Abandoned Status is not a part of the procedure and should not be included in the description as it is administrative. Many procedures are performed over a number of visits. Visit information is an entirely administrative property and should not be represented in the procedure.		Examples: • CT QC • MR Lunch Break Example: Angiography Liver Biopsy maps to RF Liver Biopsy instead of XA Liver Biopsy and XA US Abdomen Biopsy maps to US Abdomen Biopsy In both of these cases Angiography refers to the location (Angiography suite). Examples administrative procedures: • No show • Rad call back • Cancelled Procedure – not done

E.#	Editorial Guideline	Description / Explanation	Comments	Exceptions and Examples
E.9	Proprietary Descriptions (Commercial or Investigators' names)	Proprietary terms will not be used in the ON DI Term.		Examples: • Mammotome • Cardiolite • Panorex • Enterovu (contrast)
E.10	Preposition Conjunctions and Special Characters	Includes the use of "and" or "or" The term 'of' is not used in the On DI term. Special characters such as '/', "+", and "&" will not be used.	The word 'and' is used in the ON DI Term where the meaning of a description is altered by the removal of special characters.	Acceptable use of the word 'and': • RF Upper GI and small bowel follow through • US Abdomen and Liver Transplant Doppler • US Biophysical Profile and Fetal Head Doppler • US Obstetric and Fetal Head Doppler • Abdomen Lower Extremity Arterial Doppler and ABI
E.11	Terms not included in ON DI Terminology Set	The ON DI term description will not use words describing procedure technique or include extra procedure components. The description will not include the approach if it is implied in the procedure.		Examples of terms not to be used are: • Operative • Direct puncture • Guided • Stereotactic • Augmentation (AUG) • Post Exercise • With Exercise • No Exercise • Extension (EXT) • Fistula (FA) • Saline3D reconstruction • Weight bearing • Standing • Twins, Triplets • Voiding • Research study Examples: • Echocardiography with Saline maps to US Echocardiography Doppler • Lower Extremity Arterial Doppler with AUG/FA/EXT/Post Exercise maps to US Lower Extremity Arterial Doppler • Voiding Cystourethrogram maps to RF Cystourethrogram Exceptions: Procedure techniques on the following list are used in ON DI Terminology procedure descriptions: • Transvaginal • Transrectal

E.#	Editorial Guideline	Description / Explanation	Comments	Exceptions and Examples
				• Translabial • Intracavitary • Transesophageal • Doppler • Assessment (for RF) • Swallowing Assessment • ABI • WBI • Pressures • Percutaneous Examples: • US Pelvis Transvaginal • US Transesophageal Echocardiography Doppler These exceptions do not apply if the approach is implied in the procedure. Examples: • Transrectal Prostate Biopsy maps to US Prostate Biopsy • Transvaginal Hysterosonogram maps to US Hysterosonography
E.12	Acronyms and abbreviations	For complex procedures using more than 53 characters, many words have to be abbreviated.	Depending on character availability the same word might have more than one abbreviation. However, the same abbreviation must not be used for more than one word (i.e. each abbreviation must be unique). Where substances are required in the description and are required to be abbreviated, the representation should be in the form of the International chemical symbol, e.g. Se for Selenium. The approved abbreviations for the latest release of the ON DI Terminology Set can be found at the end of this document. Abbreviations are not to be used for Body Part in the ON DI Term	

E.#	Editorial Guideline	Description / Explanation	Comments	Exceptions and Examples
			description.	
E.13	Capitalization	The first letter of the term string will always be capitalized. All acronyms will be entirely capitalized. The first letter of any other abbreviation will be capitalized. The first letter of the laterality will be capitalized.		Examples : • CT Ankle Left with Contrast • CT Head and Facial Bones with Contrast
E.14	Plurality	Procedures are described as the singular in terms of body site.	Body sites are only expressed as plural when imaging is always performed on a paired structure.	Examples: • CT Salivary Glands (means more than one type of salivary gland) • MR Kidneys The following terms will be pluralized for semantic accuracy: • Facial Bones • Nasal Bones • Adrenals • Ribs • Salivary Glands • Sinuses • Orbits • Temporomandibular Joints
E.15	Exclusions and catch-all categories	Exclusion categories and catch-all terms will not be used in ON DI term descriptions. There will not be the use of terms such • excluding • other • except	There should be no exclusion categories (e.g. x excluding particular sub-types of x) and no use of the word “other” e.g. other fluoroscopy of chest) as these would not describe actual instances of procedures.	
E.16	Interventional Radiology	Interventional Radiology is a sub specialty of Radiology that utilizes minimally invasive image – guided procedures to diagnose and treat diseases in nearly every organ system.	Mapping Guidelines regarding GI Tube, Drainage, Dilatation, Angioplasty, Stent, Embolization, Central Venous Access Devices and PICC lines are presented in the Mapping Guidelines section. Angiography procedures imply that fluoroscopic imaging is part of the procedure. * XA procedures refer to vascular procedures	Examples: • XA Percutaneous Biliary Stone Extraction maps to RF Biliary Stone Manipulation • XA Splenic Artery Embolization • RF Lumbar Puncture • RF Thoracentesis • RF Biliary Drainage • XA Pyeloplasty Laparoscopic maps to RF Abdomen

E.#	Editorial Guideline	Description / Explanation	Comments	Exceptions and Examples
			using fluoroscopy * RF procedures refer to non-vascular procedures using fluoroscopy	
E.17	Modality Consults	A “Consult” procedure term is included on the ON DI Terminology set for each modality . Consult should be used when the Radiologist is asked to review outside images, historical images or give a second opinion, before recommending a procedure. The Radiologist has done only a review of images and has not had hands on contact with the patient.	The “Consult” procedure terms maps to local descriptions such as Consult, Second Opinion, Digitized, Import, Outside CD, historical Images, etc.	Example: - CT Second Opinion maps to CT Consult - MR Second Opinion maps to MR Consult
E.18	Modality Procedures	A “generic” modality procedure terms are included in the ON DI Terminology Set for. Procedure should be used when the Radiologist has actually met the patient and has had some contact with the patient. These include terms that generate a report such as: - partial study, - cancelled - minor assessment - imported images		Examples: - CT Minor Assessment maps to CT Procedure - MR Cancelled maps to MR Procedure
E.19	Standardized Terminology	The ON DI Term set will use consistent terminology throughout.		Examples: ‘-graphy’ will be used instead of ‘-gram’ - Arthrogram change to Arthrography - Angiogram change to Angiography
E.20	Use of Medical Terminology in labelling body parts	The choice of medical terms will be dependent on the modality. “Cardiac” will be used for procedure descriptions related to the heart in all modalities. These procedures may or may not include contrast.		Examples: - Lower Extremity vs. leg vs. lower limb: Lower Extremity will be the preferred term used to describe Leg or lower Limb - Upper Extremity vs. arm vs. upper limb: Upper Extremity will be the preferred term used to describe arm or upper limb - MR Heart maps to MR Cardiac - MR Cardiac with Contrast

E.#	Editorial Guideline	Description / Explanation	Comments	Exceptions and Examples
				CT Cardiac Score

Guiding Principles

These Guiding Principles are intended to guide the user on the creation and maintenance of the ON DI Terminology Set, including mapping of local hospital terms to the ON DI Term.

Specifically, they can be divided into those used:

- 1) For the creation and maintenance of the ON DI Terminology Set; provide the criteria for what is added to the terminology set.
- 2) For the map of local Ontario hospital terms to the Ontario DI Terminology Set.

Table 2: Guiding Principles for the creation and maintenance of the ON DI Terminology Set

G.#	Guiding Principle	Description / Explanation	Comments	Exceptions and Examples
G.1	ON DI Term Description	Development of the ON DI Terminology Set will follow the URU principle: Useful, Reproducible, and Understandable (Source: IHTSDO editorial guidelines). Format: • Modality • Body Part • Procedure • Laterality • Contrast		
	Mapping to SNOMED CT	The ON DI Terminology Set terms are mapped to the SNOMED CT code with the equivalent semantic meaning. The ON DI Terminology Set terms will be unique within the ON DI Terminology Set; i.e. SCT Concept ID's may ONLY be associated with one ON DI Term.		
G.2	SNOMED CT Concept ID Codes	DI Procedure Terms in the ON DI Terminology Set maps to SNOMED CT Concept ID and SNOMED CT Fully Specified	Requests for Change i.e. addition of new concepts to the ON DI Terminology set will be	

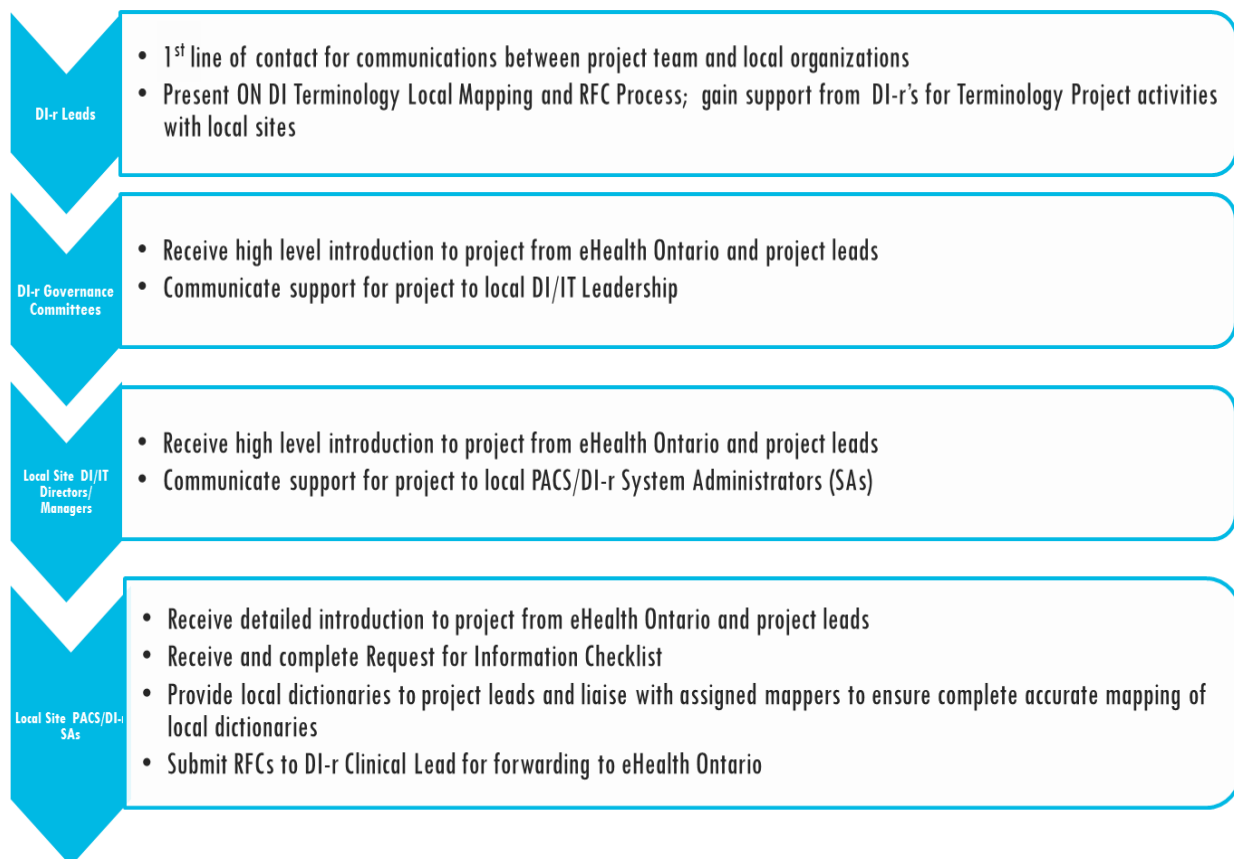
G.#	Guiding Principle	Description / Explanation	Comments	Exceptions and Examples
		Names (FSN).	reviewed for business requirement validation and mapped to SCT accordingly. Missing SNOMED CT codes will requested through the Canada Health Infoway (CHI) RFC process.	
G.3	DICOM Standard	Ontario DI Terminology Set includes the use of acronyms to describe specific modalities in the ON DI Term Description. Modality Acronyms will be based on standard DICOM. RF – Radiofluoroscopy US - Ultrasound NM - Nuclear Medicine XA - X-Ray Angiography CT -Computed Tomography MR - Magnetic Resonance BMD - Bone Mineral Density		Exceptions: XR – used for General Radiography instead of DICOM standards DR, DX &CR Mammo - used for Mammography instead of DICOM standard MG PET – used for Positron Emission Tomography instead of the DICOM standard PT
G.4	Language	The ON DI Terminology Set will use U.S. English for spelling and medical terminology.		Example: Calcaneus not Calcaneous
G.5	Date Format	The ON DI Terminology Set will use the ISO Date format.		Example: 2012/11/29 or 2012-11-19
G.6	Duplicate local RIS codes with multiple modality	Local sites may use the same RIS procedure codes with multiple modalities. These codes cannot be mapped to	These codes maps to a generic DI procedure term with no associated body part, modality or	Example: Local RIS code 1076 with multiple procedures and modality: CT Tube Change

G.#	Guiding Principle	Description / Explanation	Comments	Exceptions and Examples
		different ON DI Terms in accordance with the HIAL translation requirements.	laterality.	and US Catheter Removal maps to DI Procedure
G.7	Duplicate local RIS procedure codes with multiple procedure descriptions and/or laterality	Local sites may use the same RIS procedure codes for multiple PACS procedures and/or laterality. These codes cannot be mapped to different ON DI Terms in accordance with the HIAL translation requirements.	These codes cannot be mapped to different ON DI Terms and maps to the higher level body part or procedure for each laterality.	Example: Local RIS Code CLAV in modality XR with 3 corresponding descriptions , CLAVR (clavicle right) CLAVL (clavicle left) and CLAVS (clavicle bilateral),will all be mapped to XR Clavicle

Ontario DI Terminology Set Mapping Methodology

The Ontario DI Terminology communications (see diagram below) will be deployed following a hierarchical plan. Local sites will receive a communication package with information to guide meetings and next steps:

1. Executive Summary (announcing project)
2. ON DI Terminology Project Communications slide deck
3. ON Terminology Local Site Checklist (guides steps)
4. Local Site Dictionary Template (spreadsheet for dictionary files)
5. eHealth Ontario Request for Change form



Mapping Process - The Central Team Approach

The ongoing mapping and maintenance of Ontario local sites to the ON DI Terminology Set will be performed by the eHealth Ontario Standards Terminology Team in collaboration and consultation with:

- Clinical subject matter experts from the ON DI Program
- Local site subject matter experts
- Canada Health Infoway
- Clinicians from Ontario hospitals to address specific issues, as needed.

The Central Mapping team will:

1. Obtain local site DI dictionaries and supporting information.
2. Identify and clarify terms for review with local sites.
3. Develop local site mappings to the ON DI Terminology Set, using the Apelon mapping tool.
4. Identify and submit candidates for RFC submission to CHI.

The Format of the Local Site Map

Ontario Local site will be requested to forward their local DI dictionaries to the ON DI Terminology Project team by filling out the Local Site Dictionary Template (spreadsheet for dictionary files) and requested information templates.

The requested information includes:

- a) Local RIS/PACs dictionaries:
 - RIS Procedure Code
 - RIS Procedure Description
 - PACS Procedure Code
 - PACS Study Description
 - PACS Procedure Description
 - PACS Body Part
 - PACS Modality
 - DI-r or Regional Term
- b) List glossary/definition of abbreviations and information, i.e. sites, modality, locations and status.
- c) List blocked codes or procedure terms of studies not sent to the DI-r.
- d) Local use of “panels” or “exploding codes”.
- e) Provide copy of local RIS/PACS dictionary change management policy and procedures.

Local map format:

Name of Local Site:		Local Site Location:		Date Local Set submitted		Please fill in local site information to the shaded areas to the left.
Local Site System Administrator:		Contact Information:		Phone Number		

[illegible]

Ontario DI Terminology Set Mapping Guidelines

Table 3: Guidelines for the mapping of local Ontario hospital terms to the Ontario DI Terminology Set

M.#	Mapping Guidelines	Description / Explanation	Comments	Exceptions and Examples
M.1	All Additional View Terms	- Local Procedure terms that are additional views or images to a “parent” procedure, are mapped to the parent.	Maps to a body part and/or procedure	- Examples: - US Obstetric Additional Views maps to US Obstetric - US Recall or Added Views maps to US Procedure
M.2	All Attempted Terms	Local Procedure terms that are attempted procedure terms to a “parent” procedure, are mapped to the parent.	Maps to a body part and/or procedure	- Examples: - RF Attempted ERCP maps to RF ERCP - XA Attempted PICC Line maps to XA PICC Line
M.3	All Cancelled Procedure Terms	Local Procedure terms that are cancelled procedure terms maps to a “parent” procedure.	Maps to a body part and/or procedure	
M.4	Circle of Willis Terms	All Circle of Willis Terms in CT and MR are mapped to CT Head or MR Head		Examples: - CT Circle of Willis maps to CT Head - MR Circle of Willis maps to MR Head
M.5	Spine Terms	Local terms with 3 or more spine segments are mapped to the granular description Spine.	Spine segments include: - Cervical - Thoracic - Lumbar - Sacrum - Coccyx	Examples: - CT Cervical Thoracic Lumbar Spine maps to CT Spine - CT Head Face Cervical Thoracic Lumbar Spines maps to CT Head Spine Exception: This guideline is not applicable to XR
M.6	Fingers and Toes Terms	Local ‘digit’ terms are mapped to applicable modality hand or foot terms in the modalities MR, CT and RF.		Example: CT Finger maps to CT Hand Exception: This guideline is not applicable to XR and US

M.#	Mapping Guidelines	Description / Explanation	Comments	Exceptions and Examples
M.7	Kidney and Bladder Terms	Local 'Kidney and Bladder' terms are mapped to applicable modality Abdomen and Pelvis terms.		Example: CT Kidney and bladder maps to CT Abdomen Pelvis Exception: Bladder may be added to Renal Transplant Doppler procedures. e.g. US Bladder and Renal Transplant Doppler
M.8	Internal Auditory Canal	Internal Auditory Canal or IAC will be the term used on the ON DI Terminology Set.		Example: Internal Auditory Meatus or IAM maps to Internal Auditory Canal or IAC
M.9	Shunt	The generic term 'shunt' will be used where term description includes series, survey or assessment. Imaging of a shunt is often dependent on where in the body the shunt is located.	Term descriptions often include series, survey or assessment to include multiple body parts required for imaging.	Example: XR Shunt Survey maps to XR Shunt
M.10	Peripheral	The use of Peripheral in local procedure terms is interpreted to be the same as Extremity.	Peripheral maps to Extremity in MR, CT, XA and US	Example: MR Angiography Peripheral with Contrast maps to MR Extremity Angiography with Contrast
M.11	Upper Extremity	Upper extremity to include the listed anatomy where not stated. Upper Extremity segments include: - Shoulder girdle and it's components (clavicle, scapula, AC joint, SC joint) - Humerus - Elbow - Radius - Ulna - Forearm - Wrist - Hand - Finger - Thumb		Examples: - MR Brachial Plexus - Ultrasound of lump maps top US Soft Tissue Exception: This guideline is not applicable to the modality RF. Specific RF Upper or Lower body parts are mapped to the generic RF Upper or Lower Extremity; with or without laterality as applicable Example: - RF Shoulder maps to RF Upper Extremity

M.#	Mapping Guidelines	Description / Explanation	Comments	Exceptions and Examples
		In modalities where soft tissue is being imaged, like MR and US, that tissue, and not the bone structure is used in the ON DI Term description.		
M.12	Lower Extremity	Lower extremity to include the listed anatomy where not stated. Lower Extremity segments include: • Hip • Thigh • Femur • Knee • Tibia • Fibula • Calf • Ankle • Foot • Toe In modalities where soft tissue is being imaged, like MR and US, the tissue and not the bone is structure used in the ON DI Term description.		Example: • Thigh X-ray maps to XR Femur. • Thigh Ultrasound maps to US Thigh. Exception: This guideline is not applicable to the modality RF. Specific RF Upper or Lower body parts are mapped to the generic RF Upper or Lower Extremity; with or without laterality as applicable Example of exception: • RF Thigh maps to RF Lower Extremity
M.13	Chest	Chest and not Thorax will be used in the ON DI term to ensure user recognition, as chest is the recognized terminology in plain film radiography.		Example: • XR Thorax maps to XR Chest.
M.14	Angiography	Angiography of a specified body part maps to the body part specific angiography term.	Angiography includes both venography and arteriography for the ON DI Terminology mapping purposes. This applies to CT, MR and XA. The use of contrast is assumed in all cases,	Examples: • MR Brain + MRV maps to MR Head Angiography • CT Mesenteric Angiography maps to CT Abdomen Angiography

M.#	Mapping Guidelines	Description / Explanation	Comments	Exceptions and Examples
			with the exception of MR. CT Mesenteric Angiography is a CT Abdomen Angiography procedure.	
M.15	Head	The procedure description “Head” includes all or some of its components. In the modality RF, the procedure description RF Head includes fluoroscopy of all body parts within the head. See M16 for guidelines related to multiple body part mapping for head.	Components of the Head include: • Posterior Fossa • IAC • Temporo-mandibular Joints • Mastoids • Brain • Superficial Structures These components are part of the head and not mapped separately from it. Small parts of the head include: • Sinuses (all) • Facial bones • Orbits • Mandible	Examples: • CT of Mastoid sinus maps to CT Mastoid • CT of Head and Posterior Fossa maps to CT Head • RF Internal Auditory Canal Tomography maps to RF Head • RF Mandible maps to RF Head • RF Transphenoidal maps to RF Head Exceptions: This guideline is not applicable in the following situations: • Modality XR • When Brain is specified as the procedure in the modality US e.g. US Brain • Fetal Head is considered a Doppler procedure and mapped as such when added to any Obstetric procedure e.g. US Biophysical Profile and Fetal Head Doppler • Vascular Ultrasound procedures are not included in this guideline and are mapped according to the listed Doppler guidelines e.g. US Transcranial Doppler
M.16	Multiple Body Part – Head	Local terms with two or more segments of the head will be mapped as Head.	Body parts that are part of the head and not mapped separately from	Examples: Parent + 1 smaller part = map as indicated

M.#	Mapping Guidelines	Description / Explanation	Comments	Exceptions and Examples
		Note: Parent body part refers to the highest level of classification for a body part or region. Small body part refers to the more granular level.	it include: - Posterior Fossa - IAC - Temporo-mandibular Joints - Mastoids - Brain - Superficial Structures Small parts of the head include: - Sinuses (all) - Facial bones - Orbits - Mandible	- CT Head + Sinuses = CT HEAD SINUS - CT Head + IAC = CT HEAD Parent + multiple smaller body parts = map to dominant - CT Head + Sinus + Facial Bones = CT HEAD Parent + 1 small + dominant = map as indicated - CT Head Orbit Spine = CT Head Orbit Spine - CT Head Posterior Fossa Spine = CT Head Spine Parent + multiple smaller body parts + parent maps to parent body parts - CT Head Orbit Mandible Spine = CT Head Spine Exception: - Not applicable to the modality XR where parts of the head are mapped separately - In the modality RF, all parts of the head are mapped to the more granular description "Head"
M.17	Salivary Glands	All salivary glands map to the more generic term "Salivary Glands" for all modalities.	Salivary Glands include: - Parotid - Submandibular - Sublingual	Example: US Parotid Gland maps to US Salivary Glands
M.18	Soft Tissue	Soft tissue imaging in local procedure descriptions are mapped to the body part of the procedure for all modalities except US.	Ultrasound provides the generic procedure description term 'Soft Tissue' to map to if a body part is not provided. This includes: - Lump - Mass	Examples: - CT Soft Tissue Neck maps to CT Neck - US Abdomen Soft Tissue will map to US Abdomen - US Lump maps to US Soft Tissue

M.#	Mapping Guidelines	Description / Explanation	Comments	Exceptions and Examples
			Soft tissue	
M.19	Percutaneous	Percutaneous is a technique and will not be used in ON DI Term descriptions.	“Percutaneous” is most often used to refer to the initial insertion of a drainage tube.	Examples: - Percutaneous Endoscopic Gastrostomy (PEG) maps to Gastrostomy - Percutaneous biliary drainage (PBD) maps to Biliary Drainage - Percutaneous Nephrostomy Drainage maps to Nephrostomy Drainage - Percutaneous Transhepatic Cholangiography (PTC) maps to Cholangiography - RF Percutaneous Cordotomy maps to RF Spine
M.20	Biopsy	Biopsy terms maps to the specified body part. Where a local term does not specify a body part the local term maps to “Biopsy” for all modalities.	A Biopsy may or may not include contrast.	Examples: - RF Abdomen Biopsy - CT Biopsy - US Liver Biopsy
M.21	Localizations	Needle, Wire and Coil will not be included in the ON DI term.		Example: US Breast Needle Localization Right maps to US Breast Localization Right
M.22	Nephrostomy Drainage	Nephrostomy Drainage procedures will encompass all activity through the tube	This term implies any or all of the following: insertion, assessment, manipulation, revision, replacement, removal, Nephrolithotomy (percutaneous removal or manipulation of stones) and all activity around the use of nephroureteral stents.	Example: RF Nephrostomy Tube Insertion maps to RF Nephrostomy Drainage
M.23	Mammography	Mammography includes diagnostic and screening procedures. Mammography is an	Mammo Additional views maps to the appropriate Mammo term.	Examples: - MG Additional View Lt maps to Mammo Left. - Mammography of right

M.#	Mapping Guidelines	Description / Explanation	Comments	Exceptions and Examples
		Exception to ON DI Terminology Set Naming Convention Mammography ON User Interface Terminology does not follow convention in the set for body part. There is no body part indicated as breast is implied (Please refer to Editorial Guideline E.1) For the modality of Mammography, Mammo will be used and not Mammo Breast to ensure user recognition, as mammography is the recognized terminology.		breast maps to Mammo Right
M.24	Breast	The generic description 'Breast' includes all imaging activities related to the breast in the modalities MR, CT and RF. These procedures may or may not include contrast. This does not include biopsy or radiology specimen. See E7 guideline for biopsy and mapping rule M.69 for Mammo Specimen		Examples: - MR Guided Breast Needle Localization maps to MR Breast - CT Breast Localization maps to CT Breast
M.25	XR Skeletal Survey	All types of XR Skeletal Surveys are mapped to Skeletal Survey for both the Adult and Pediatric population.	Types of Skeletal Surveys: - Metastatic - Metabolic - Arthritic - Bone Age - Babygram	Example: X-ray Metastatic Survey maps to XR Skeletal Survey
M.26	Doppler	Any vascular study will include the term 'Doppler' in the procedure name. All other body part studies will not include the term 'Doppler' in the name but may or may not include Doppler during the procedure e.g. US Abdomen, US Penis	The term 'Vascular' will be considered the generic form of Doppler studies. - If a study indicates both arterial and venous, the term "Vascular" will be used in place of these. - If a plain Doppler code is requested, the term "Vascular" will be added to it.	Examples: - US Carotid Doppler - US Lower Extremity Arterial Doppler - US Echocardiography Doppler - US Uterine Artery Doppler - US Abdomen - US Transcranial Doppler Comment examples: - Lower Extremity Arterial Venous Doppler maps to US Lower Extremity Vascular Doppler

M.#	Mapping Guidelines	Description / Explanation	Comments	Exceptions and Examples
			3. If a name of a vessel has been supplied but may be a vein or artery, the term "Vascular" will be added to it unless otherwise specified. 4. Studies including a contrast or extra components to the procedure will not include these as part of the name.	2. US Doppler maps to US Vascular Doppler 3. US Subclavian maps to US Subclavian Vascular Doppler Or US Iliac Doppler maps to US Iliac Vascular Doppler 4. Echocardiography with Saline maps to US Echocardiography Doppler Or Lower Extremity Arterial Doppler AUG/FA/EXT/Post Exercise maps to US Lower Extremity Arterial Doppler Exception: ABI (Ankle Brachial Index), WBI (Wrist Brachial Index) or other Pressure studies will be added as part of the name if indicated by the local site i.e. Lower Extremity Arterial Doppler and ABI
M.27	US Obstetric	"Obstetric" is to be used as the procedure description encompassing all obstetric studies regardless of patient condition and pathology. Local procedure descriptions using words describing procedure techniques or including extra procedure components will not be used in the ON DI Term description.	Examples of terms not used are: - US Maternal Fetal Procedures - US Genetic Screening - US Gestational Age - US Complete Pregnancy - US Complete Pregnancy High Risk - US Pregnancy Multiple Gestation - US Limited - High Risk/Complicati	Examples: - Level 2 Ultrasound maps to US Obstetric - Limited Obstetric scan Additional Views maps to US Obstetric 18 week scan Twins maps to US Obstetric Exceptions: - US Biophysical Profile - US Nuchal Translucency - Doppler procedures. e.g. US Fetal Echocardiography Doppler and US Fetal Head Doppler - Transvaginal, Transrectal, Perineal and Intracavitary procedures

			ons • 16 /18 Week Scan • Level 2 Ultrasound • US Obstetrical 1st and/or 2nd Trimester (including multiple fetus) • Twins Morphology scan • US Obstetrical Comprehensive • US Obstetrical Maternal Serum Screening • US Obstetric Amniocentesis	will be added to the procedure description when applicable Example of exception: • Obstetric and Transvaginal scan for Placenta position maps to US Obstetric Transvaginal
M.28	RF GI Tube	Procedures (or modifications) related to the GI tube maps to the type of tube.	Common gastric tubes include: • Gastrostomy (G Tube) • Percutaneous Endoscopic Gastrostomy (PEG Tube) • Gastrojejunostomy (GJ Tube) • Nasogastric (NG Tube) • Orogastric Tube (OG Tube) • Nasojejunostomy (NJ Tube) • Jejunostomy (J Tube) RF Feeding Tube is to be used when the type of tube is unknown but the description is 'feeding'. GI Tube Procedure term implies any or all: • Insertion • Assessment • Manipulation	

			• Revision • Replacement • Removal	
M.29	RF Nasogastric Tube	This term encompasses all activity through the Nasogastric or Orogastric Tube including insertion, assessment, manipulation, revision, replacement and removal.	RF Nasogastric Tube or NG Tube or OG Tube.	Examples: • Insertion of Orogastric Tube (OG) maps to RF Nasogastric Tube • Removal of NG Tube maps to RF Nasogastric Tube
M.30	Drainage	“Drainage” is to be used as the generic procedure description when the body part is not stated. The procedure description ‘Drainage’ encompasses all activity through the drainage tube including: • Insertion • Assessment • Manipulation • Revision • Replacement • Removal This includes drains such as: • Abscess • Lymphocele • Biloma • Urinoma This is applicable to modalities XR, CT and RF.	Pelvis Drainage will also be the generic description for the local procedures “Bladder Drainage and Cystostomy”. This applies to CT, RF and US Note: “Nephrostomy Drainage” procedures will encompass all activity through the tube including insertion, assessment, manipulation, replacement, removal and anything related to and Nephrolithotomy. It will also include all activity around the use of Nephroureteral stents.	Examples: • RF Biliary Drainage • RF Nephrostomy Drainage • RF Suprapubic Catheter maps to RF Pelvis Drainage. • RF Bladder Drainage and Cystostomy maps to RF Pelvis Drainage
M.31	Dilatation	Dilatation will refer to non-vascular dilatation procedures. The generic description of RF dilatation is used when a specified body part has not been indicated in the local procedure description	Vascular dilatations are mapped to the modality XA Angioplasty procedures.	Examples: • RF Esophageal Dilatation • RF Biliary Stricture Dilatation • RF Dilatation of Tract maps to RF Dilatation • RF Non Vascular Stricture Dilatation maps to RF Dilatation
M.32	Angioplasty	Angioplasty terms used within XA modality imply arterial unless otherwise		Example: • XA Carotid Angioplasty

		specified by the local site dictionary. XA Angioplasty is used as the generic term to map unspecified Angioplasty procedures otherwise they are mapped to the specific body part angioplasty term.		
M.33	Stent	Stent procedures that are vascular are mapped to the modality XA. Non-vascular stent procedures are mapped to the modality RF. Procedures with an unspecified body part are mapped to a generic description term 'Stent'. When a body part is specified it maps to the body part specific stent procedure description. A stent term encompasses all activity through the stent including: • Insertion • Assessment • Manipulation • Revision • Replacement • Removal • May also include angiography, angioplasty, thrombolysis and thrombectomy procedures		Examples: • RF Cystoretro and Stent Exchange maps to RF Ureter Stent • RF Cystoretro and Stent Insertion will maps to RF Ureter Stent • XA Cerebral Stent
M.34	Embolization	In the modality XA the term Embolization implies arterial unless venous is stated. This includes Transarterial Chemoembolization (TACE). Embolization of a specified body part maps to the body part specific embolization term description otherwise to		Examples: • XA Splenic Embolization maps to XA Splenic Artery Embolization • XA Venous Embolization • XA Uterine Artery Embolization

		the generic term 'XA Embolization'.		
M.35	Lines and Central Venous Access Devices	'Lines' will refer to central venous access devices inserted into a vein for the purpose of injections and/or withdrawing blood samples. This includes: • Hickman Catheter • Aphaeresis Catheter • Portacath • Tunneled Catheter • Dialysis Catheter All lines maps to XA Central Line with the exception of PICC Lines (Peripherally Inserted Central Catheter) which map to XA PICC Line	This includes all activity involving venous catheters including: • insertion • assessment • manipulation • revision • replacement • removal • angioplasty • fibrin sheath removal • thrombolysis • thrombectomy	Example: • XA Hickman Catheter Insertion maps to XA Central Line Exception: • XA PICC Line Change maps to XA PICC Line
M.36	NM Lung Scan	'NM Lung Scan' includes all NM Lung imaging procedure descriptions from the local sites.	NM Lung Scan includes and implies the following studies: • NM Ventilation and Perfusion Lung Scan • NM Ventilation Lung Scan • NM Perfusion Lung Scan • NM V/Q Scan	
M.37	Unstated Body Part	When the local site exam does not include a body part, a generic procedure description will be used for mapping in all modalities.		Examples: • XA Embolization • XA Angioplasty • RF Ablation • CT Biopsy • US Extremity
M.38	NM Interface Term Descriptions	NM procedure terms make extensive use of descriptive nouns that are user recognizable and therefore helpful to the users for clarity.	Terms included are: • Study • Scan • Test	Examples: • NM Thyroid Scan • NM Renal Study
M.39	Combination Procedures	Local site descriptions including more than one procedure cannot be mapped. A local site decision will be sought to determine which ON DI term is the best match if they do not have two separate local procedure codes for the combination		Examples: • RF Intravenous Pyelography and Cystography should map to both RF Intravenous Pyelography and RF Cystography

		exams.		
M.40	RF Percutaneous Cordotomy	Cordotomy procedures implies body part 'Spine'		Example: RF Percutaneous Cordotomy maps to RF Spine
M.41	Thoracic Inlet/Outlet	'Thoracic Inlet' is used to describe all associated study types including: - Inlet - Outlet - Inlet and Outlet For the modality US, Thoracic Outlet is the preferred terminology.		Examples: - XR Thoracic Inlet and Outlet maps to XR Thoracic Inlet - US Thoracic Outlet
M.42	MG Ductography	The procedure description Mammo Ductography is used to describe all associated study types e.g. Galactogram.		Example: MG Galactogram maps to Mammo Ductography
M.43	US Liver and Portal System Doppler	Local system procedure US Doppler Liver and Portal System maps to US Liver and Portal System Doppler and will include all related study types within this procedure description.		Example: US Portal Hypertension maps to US Liver and Portal System Doppler
M.44	NM Thyroid Scan	'Thyroid Scan' is used to describe all related procedures for the modality NM.	This rule does not apply to NM Thyroid Metastatic Study (See Mapping Guideline M.45)	Examples: - NM 123 Iodine Thyroid Scan/Flush maps to NM Thyroid Scan - NM Thyroid Scan 99m-Tc maps to NM Thyroid Scan Exception: - Thyroid Uptake and Scan This combination procedure of the thyroid scan and thyroid uptake provides information about the structure and function of the thyroid so it is important to list these components of the study separately.
M.45	NM Thyroid Metastatic Study	Nuclear Scintigraphy provides functional information because of the ability of the radionuclides to be taken up by functioning thyroid tissue; and subsequent use for both therapy of and management of metastatic thyroid carcinoma.		Examples: The following procedures map to NM Thyroid Metastatic Study: - Thyrogen Stimulated Met Survey - NM Thyrogen Injection Day 1 - NM Thyrogen Injection Day 2 - NM THYROGEN

				• NM THYROID MALIGNANCY • POST THYROID THERAPY WB SCAN
M.46	NM Breath Test	'Breath Test' is used to describe all breath test procedures for the modality NM.		Examples: • NM C14 Urea Breath Test maps to NM Breath Test • NM C14 Xylose Breath Test maps to NM Breath Test
M.47	NM Renal Study	'Renal Study' is used to describe all related procedures for the modality NM.	NM Renal Study involves all activity including: • GLOMERULAR FILTRATION RATE (GFR) • RENOGRAM • Lasix Captopril Renal scans • DMSA, DTPA and Mag3, procedures	
M.48	NM Biliary Scintigraphy	'NM Biliary Scintigraphy' is used to describe all related procedures for the modality NM.	NM Biliary Scintigraphy involves all activity including: • HIDA Scan • DISIDA Scan • Hepatobiliary Scan • May include procedures including 'With CCK'	
M.49	NM Red Cell Mass and Plasma Volume	The generic description NM Red Cell Mass and Plasma Volume is used in the modality NM to describe all related procedures.		Examples: The following procedures map to NM Red Cell Mass and Plasma Volume: • NM Red Cell Mass and Plasma Volume • NM Red Cell Mass • NM Plasma Volume • NM Red Cell Volume
M.50	NM Peritoneal Imaging	'NM Peritoneal Imaging' is used in the modality NM to describe related procedures.		Examples: The following procedures map to NM Peritoneal Imaging: • NM Abdominal Scintigraphy • NM Peritoneal Scintigraphy • NM Systemic Shunt
M.51	NM Cardiac Angiography	'NM Cardiac Angiography' is used for the modality NM to describe related procedures.		Examples: The following procedures map to NM Cardiac Angiography:

				• NM CARDIAC TRANSIT • NM CARDIOANGIOGRAM FIRST PASS • NM RNA FIRST PASS • NM First Pass
M.52	NM Lacrimal Duct Scan	'NM Lacrimal Duct Scan' is used for the modality NM to describe related procedures.		Example: • NM DACROSCINTOGRAM
M.53	NM Neuroendocrine Imaging	'NM Neuroendocrine Imaging' is used for the modality NM to describe related procedures.		Examples: The following procedures map to NM Neuroendocrine Imaging: • NM Octreotide Scan • NM DIAGNOSTIC 123-I MIBG BODY SURVEY • NM Pheo imaging – Octreotide
M.54	NM Wall Motion Study	'NM Wall Motion Study' is used for the modality NM to describe related procedures.		Examples: The following procedures map to NM Wall Motion Study: • NM Ejection Fraction • NM Exercise Ejection Fraction
M.55	NM Bowel Transit Study	'NM Bowel Transit Study' is used for the modality NM to describe related procedures.		Example: The following procedures map to NM Bowel Transit Study: • NM G.I. TRANSIT - ORO-CECAL • NM GI Transit
M.56	NM Esophageal Study	'NM Esophageal Study' is used for the modality NM to describe related procedures.		Examples: The following procedures map to NM Esophageal Study: • NM Gastroesophageal Reflux • NM Gastric Reflux • NM Esophageal Motility Exception: • NM Esophageal Motility and Reflux This is a combination procedure and refers to two separate studies: NM Esophageal Transit Scintigraphy and Gastroesophageal Reflux Study.
M.57	NM Arthrography	'NM Arthrography' is used for the modality NM when a body part is not indicated in the local site description. When a body part is indicated		Examples: NM Hip Arthrography NM Knee Arthrography NM Lower Extremity Arthrography

		in the local site procedure description NM will be consistent with other modalities in following guiding principles related to body part/multiple body parts.		
M.58	NM Sentinel Node Imaging	'NM Sentinel Node Study' is used for the modality NM to describe related procedures.		Examples: The following procedures map to NM Sentinel Node Imaging: - NM Melanoma Torso/Extremities Injection - NM Mammary Internal Nodes
M.59	NM Therapy Malignancy	'NM Therapy' is used for the modality NM to describe related procedures.		Examples: The following procedures map to NM Therapy: - NM Thyroid Therapy Malignancy - NM Therapy Endoc MIBG – Mets
M.60	NM Cystography	'NM Cystography' is used for the modality NM to describe related procedures.		Examples: The following procedures map to NM Cystography: - NM VU Reflux - NM Vesicoureteral Reflux
M.61	CT Chest Abdomen	CT Chest and additional Organs mapped to CT Chest Abdomen (see also E6 guideline)	CT Chest combined with a single abdomen organ such as liver, pancreas, kidney maps to CT Chest Abdomen	Examples: - CT Chest and Liver maps to CT Chest and Abdomen - CT Chest and Pancreas maps to CT Chest and Abdomen
M.62	CT Angiography	In the modality CT, for local procedure description, the prefix 'Endo' refers to CT Angiography.		Examples: - CT Endo maps to CT Angiography - CT Endo Chest Abdomen maps to CT Chest Abdomen Angiography
M.63	Enterography	The procedure description 'Enterography' also implies enteroclysis in the modalities CT, MR and RF.		Example: MR Enteroclysis maps to MR Enterography
M.64	Myelography	The invasive procedure 'Myelography' infers spine therefore the body part 'spine' is not listed in the procedure description.		Examples: - RF Cervical Spine Myelography maps to RF Cervical Myelography - CT Myelogram Spine maps to CT Myelography
M.65	CT Neck Angiography	The procedure description 'CT Neck Angiography'		Example: CT Neck and Carotid

		includes all the anatomy parts in the neck with the exception of spine. Where multiple body parts are in the description, the parent body part will be referenced.		Angiography maps to CT Neck Angiography
M.66	CT Neck	The procedure description 'neck' in the modality CT is inclusive of all neck anatomy, with the exception of the spine, thyroid, parathyroid.		Exceptions: • CT Thyroid • CT Parathyroid • CT Cervical Spine
M.67	CT Sinography	Sinography is an invasive procedure, and may include the use of contrast. Local procedure terms with granular body parts are mapped according to the editorial guidelines (E.5) used for Aspirations/Injections.		Examples: • CT Pelvis w/o IV Contrast and Sinogram maps to CT Pelvis Sinography • CT Sinography • CT Abdomen Pelvis Sinography with Contrast
M.68	Echocardiography	The procedure description Echocardiography is used to describe all granular technique descriptions and workload related to these studies. They map to the modality US and will follow the contrast and Doppler guiding principles.		Examples: • EC Echo & Saline Bubble Study maps to US Echocardiography Doppler • EC Echo Focus maps to US Echocardiography Doppler • EC Echo Resynchronization maps to US Echocardiography Doppler
M.69	Mammo Specimen	Mammo Specimen represents a biopsy procedure with specimen for mammography.		Example: • Mammo Specimen and Biopsy maps to Mammo Specimen
M.70	OBSP Procedures	OBSP (Ontario Breast Screening Program) procedures are mapped to the ON DI Term description Mammo Mammography.		Example: • Mammo OBSP maps to Mammo Mammography
M.71	MR Aorta	Procedure descriptions in the modality MR related to the Aorta are mapped separately, not in a generic format. They are different procedure types and therefore terms are required for all.		Examples: • MR Aorta • MR Aorta with contrast • MR Aorta Angiography • MR Aorta Angiography with contrast
M.72	NasoPharynx, Pharynx, Oropharynx	Oral Cavity, Oropharynx, Pharynx, Nasopharynx or any combination of these maps to Head Neck in the modalities MR, CT and US.		Example: • MR Oropharynx maps to MR Head Neck

M.73	Parathyroid	The body part 'parathyroid' will be mapped to Parathyroid in all modalities.		Examples: • MR Parathyroid • CT Parathyroid • NM Parathyroid Scan
M.74	Cholecystostomy	The procedure description Cholecystostomy encompasses all activity related to the drainage tube, including: • Insertion • Assessment • Manipulation • Revision • Replacement • Removal This applies to all applicable modalities.		Example: • RF Cholecystostomy • US Cholecystostomy • CT Cholecystostomy
M.75	Proctography	The procedure description Proctography includes Defecography in the modalities MR and RF.		Example: • RF Defecography maps to RF Proctography
M.76				
M.77	RF Fallopian Tube	The generic description RF Fallopian Tube and will be used to describe related procedures in the modality RF such as: • Cannulation • Recanalization • Catheterization • Tuboplasty		Examples: • RF Fallopian Tuboplasty maps to RF Fallopian Tube • RF Fallopian Cannulation maps to RF Fallopian Tube • RF Fallopian Catheterization maps to RF Fallopian Tube
M.78	RF Foreign Body Removal	When a body part is not known, the generic description RF Foreign Body Removal will be used. When the local procedure description includes a body part, it maps to that ON DI body part description.		Example: • RF Head Foreign Body Removal maps to RF Head
M.79	RF Intravenous Pyelography	The procedure description RF Intravenous Pyelography may or may not include tomography as part of the procedure being performed.		Example: • RF IVP and Tomography maps to RF Intravenous Pyelography
M.80	RF Peritoneal Dialysis Catheter	RF Peritoneal Dialysis Catheter encompasses all activity through the catheter including: • Insertion		Example: • RF OR Tenckhoff Tube Insertion maps to RF Peritoneal Dialysis Catheter.

		• Assessment • Manipulation • Revision • Replacement • Removal		
M.81	RF Ureterography	The procedure description RF Ureterography implies Ureteroscopy as part of the procedure being performed. Ureteroscopy procedure descriptions are mapped to this unless they are in combination with lithotripsy.		Example: • RF Ureteroscopy maps to RF Ureterography
M.82	RF Lithotripsy	The procedure description RF Lithotripsy may or may not include Ureteroscopy as part of the procedure being performed.		Example: • RF Ureteroscopy & Lithotripsy maps to RF Lithotripsy
M.83	Ultrasound Procedure terms	For the modality of US, some procedure technique descriptions are listed in the ON DI procedure description as an exception to the editorial guideline of 'Terms not Used'. These include: • Transvaginal • Transrectal • Translabial • Intracavitary • Transesophageal • Doppler • ABI* • WBI • Pressures *The procedure description US Ankle Brachial Pressures (ABI) is used to describe associated local site procedure descriptions. i.e US Ankle Pressures	The prefix 'Endo' is not used in the ON DI procedure description techniques related to a body cavity. For example: • Endocavity is Intracavitary • Endovaginal is Transvaginal • Endorectal is Transrectal Also, the generic technique description, when the body part cavity is not indicated by the local site, is Intracavitary.	Examples: • US Pelvis Transvaginal • US Transesophageal Echocardiography Doppler • US Pelvis and Endo maps to US Pelvis Intracavitary • US Ankle Pressures maps to US Ankle Brachial Pressure Index Doppler Exception: US Segmental Pressures This procedure description is the generic form and used as required. Exception: If the procedure approach is implied, it will not be included as part of the procedure description name. Exception Example: • Transrectal Prostate Biopsy maps to US Prostate Biopsy • Transvaginal Hysterosonogram maps to US Hysterosonography

M.84	Fluid Localization	Local site fluid localization procedure descriptions are mapped to the associated body part.		Examples: - US Fluid Localization for Paracentesis maps to US Abdomen - US Fluid Localization for Thoracentesis maps to US Chest
M.85	Inferior Vena Cava Filter	The generic description “Inferior Vena Cava Filter” is used to describe all procedure descriptions related to this including: - Insertion - Assessment - Manipulation - Revision - Replacement - Removal		Example: XA Inferior Vena Cava Filter removal maps to XA Inferior Vena Cava Filter
M.86	XR Tomography	Tomography maps to body part if specified. If no body part is specified maps to XR Tomography.		Examples: - XR Kidney Tomography - XR Tomography
M.87	Nailing, Rodding or Pinning	Nailing, Rodding & Pinning procedures are mapped to the referenced body part for all modalities. If the body part is not indicated in the local procedure description, it maps to the generic description which includes: ‘Extremity’ in the modality XR - Musculoskeletal in the modality RF	All activity related to these procedure descriptions is implied, including: - Insertion - Replacement - Assessment - Removal - Revision	Example: RF Intramedullary Nailing maps to RF Musculoskeletal

Table 4: Guidelines for mapping the Ontario DI User Interface Terms to a Body Part Association

M.#	Mapping Guidelines	Description / Explanation	Comments	Exceptions and Examples
M.1	DICOM Standard	Body Part mapping will use DICOM CID 4 table for Anatomic Region for anatomy imaged.	Where the same DICOM code is used in multiple context groups with different descriptions, the description from the	Example: CID 4030 -T-71000=Kidney Kidney will be used and not CID 4 -T-71000=Endo-renal

		Context groups from CID 4 will be used for anatomy imaged in specific modalities where applicable. CID 4030 - CT, MR and PET Anatomy Imaged CID 4040 - Endoscopy Anatomic Regions CID 4042 -XA and RF Anatomy Imaged which includes: CID 3010 –Cardiovascular Anatomic Locations CID 4031 – Common Anatomic Regions	modality imaging context group will be used. The specific body part will be mapped where available and higher level parent anatomy will be assigned where not.	Example: MR Clavicle maps to T-12310 Clavicle MR Calf maps to T-D9400 Lower Leg
M.2	ON DI Terms with no body part	Procedures with no specific anatomic region will have no corresponding Body Part association such as: CT Drainage, BMD Procedure, NM Red Cell Mass and Plasma Volume, NM Schillings Test	Procedures with implied body part will be mapped accordingly.	Example: • Thoracentesis maps to D3000 Chest
M.4	Multiple Body Parts	CID 4 includes both singular and combination terms such as: R-FAB55 Chest and Abdomen T-D3000 Chest T-D4000 Abdomen ON DI combination terms maps to two (or more) singular CID 4 codes		Example: • CT Chest Abdomen maps to D3000 Chest and T-D4000 Abdomen
M.5	Mammography	All ON DI terms for Mammo maps to Breast.		Example: • Mammo Mammography maps to T-04000 Breast

M.6	Venous and arterial studies	Map to the specific CID 4 Body Part when included in the ON DI term (e.g. jugular vein) or a generic when not specified in the ON DI Term (e.g. artery/vein). ON DI terms without this specificity will not be mapped (e.g. 'vascular' or 'angiography').		Examples: NM Venography maps to T-48000 Vein XA Arterial Embolization maps to T-41000 Artery
M.7	Obstetric and Fetal Procedures	All ON DI obstetric procedures maps to Abdomen and Pelvis. No fetal anatomy will be included in the mapping association.	Fetal procedures are considered part of the maternal anatomy and will not be mapped separately.	Examples: US Obstetric maps to T-D4000 Abdomen and T-D6000 Pelvis US Fetal Shunt maps to T-D4000 Abdomen and T-D6000 Pelvis
M.9	Contiguous Sites	Any body part that includes more than one anatomic region will map all applicable anatomic regions.		Example: Salivary Glands maps to both T-D1100 Head and T-D1600 Neck
M.10	Additional Approaches	Imaging that includes additional views such as endovaginal, transrectal, transvaginal and translabial will not be associated to a Body Part. Only the main site will be mapped.		Example: US Abdomen Transvaginal maps to T-D4000 Abdomen

Table 5: Guidelines for mapping the Ontario DI User Interface Terms to a Modality association

M.#	Mapping Guidelines	Description / Explanation	Comments	Exceptions and Examples
M.1	DICOM Standard	DICOM CID 29 Modality Acquisition list will be used for creating the modality association for the ON DI Term Set.		Exceptions: Mammo, PET and XR Mammo maps to MG PET maps to PT XR, which includes the DICOM standard CR and DX, maps to DX as the more prevalent current industry practice

Table 6: Guidelines for mapping the Ontario DI User Interface Terms to a Laterality association

M.#	Mapping Guidelines	Description / Explanation	Comments	Exceptions and Examples
M.1	DICOM Standard	DICOM standard DCMR context group 244 for laterality will be used: G-A100 – Right G-A101- Left G-A102- Right and left G-A103 –Unilateral Bilateral terms maps to G-A102 Right and left.		Exception: G-A103 – Unilateral is not applicable to the ON DI set
M.2	Implied Laterality	There will be no implied laterality association. Only the laterality identified in the ON DI Term will be mapped.		

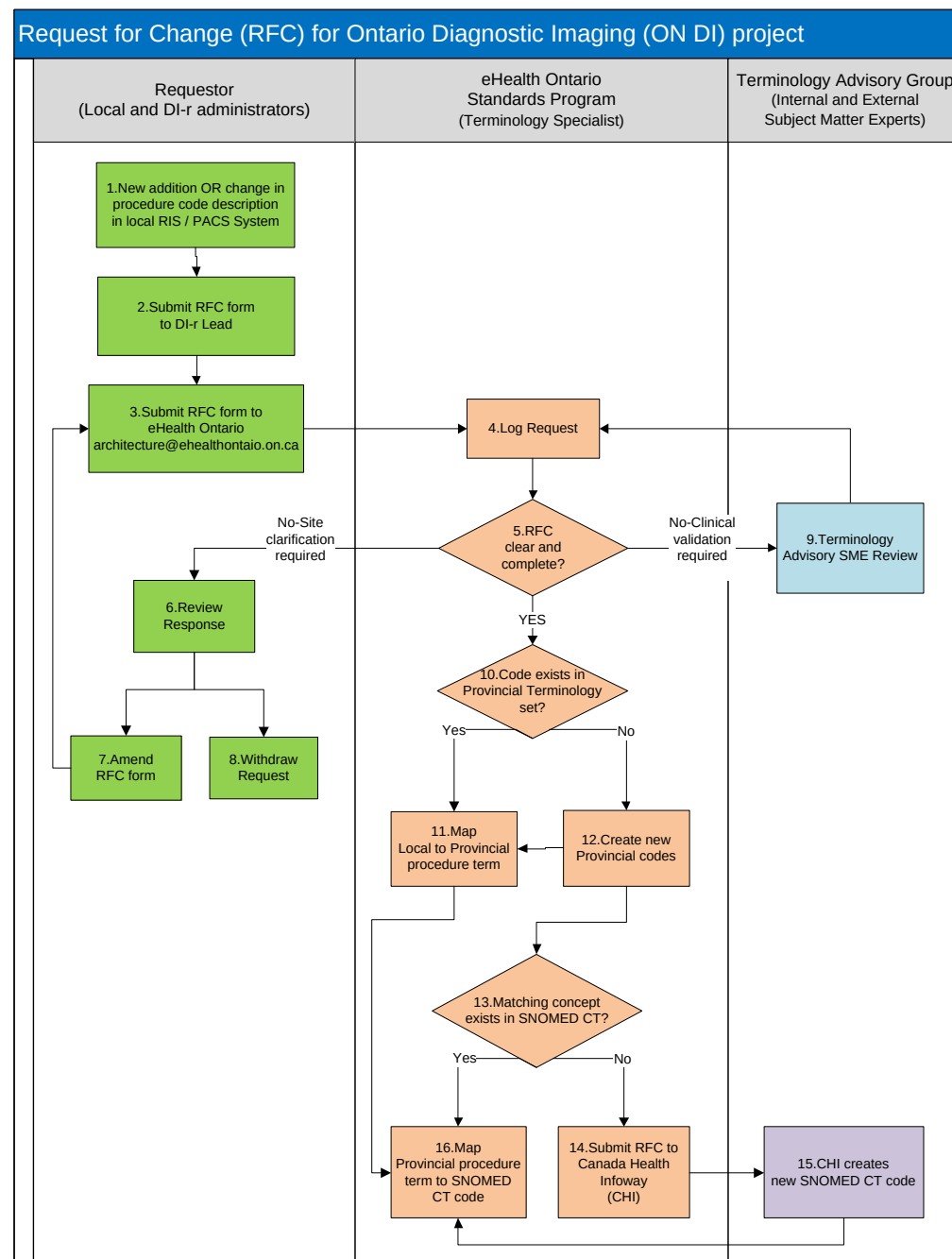
Implementation and Maintenance

Requests for Change (RFC)

eHealth Ontario will only add ON DI Terms that align with the reports and images that are stored in the DI-r for the purpose of providing healthcare, and are shared from within and across the DI-rs in Ontario. Supporting documentation for additions to the ON DI Terminology Set may be required to assist with use case validation. RFC's will be based on the review of existing procedures and verification that the added procedure is appropriately labeled using the naming convention for the ON DI Terminology Set.

Requests for change to SNOMED CT will be created based on CHI and IHTSDO editorial guidelines for creating fully specified names, which may be different from the naming convention used for the ON DI Terminology Set. The RFCs will be processed by CHI and determine whether newly created content will be added to the Canadian Extension of SNOMED CT and or promoted to the SNOMED CT core set. Any RFC changes submitted to the IHTSDO that are not accepted into the core set will be considered for the Canadian Extension.

RFC Process:



RFC Form:

Ontario DI Terminology Project - RFC Submission Form										
Information about the Requestor										
Date Change Effective	Organization Name	Site Name (if applicable)	Contact Name	Email Address	Phone Number	Submit To:	architecture@ehealthontario.on.ca			
YYYYMMDD										
Please complete the columns below and provide additional information and supporting documentation.										
Request Type	RIS Procedure Code	RIS Procedure Description	PACS Procedure Code (the DICOM tag)	PACS Procedure Description (the DICOM tag)	Study Description (the DICOM tag)	PACS Modality (the DICOM tag)	PACS Body Part (the DICOM tag)	DICOM LATERALITY CODE (if available)	CONTRAST (if applicable)	Comments

Update Frequency

All RFC candidates identified during local mapping phase of the ON DI Terminology Project will be collected, assessed and submitted to Canada Infoway Standards collaborative by eHealth Ontario Standards. The eHealth Standards Program will update the ON DI Terminology set prior to publication to the eHealth Ontario HIAL for use DICS Registry services.

The frequency of updates to the ON DI Terminology set will be determined the eHealth Standards ON DI Program areas.

Accountability

Local sites will be asked to provide the project with a key resource that will make available a copy of their local RIS/PACS dictionary. This resource will support the mapping exercise when explanation regarding specific local procedure terms is required.

Following submission of the site dictionaries to terminology project team, any changes (i.e. new terms added) to the local dictionaries must be communicated to eHealth Ontario Standards Program via the RFC process outlined in this document. This Provincial initiative relies on shared accountability between the local hospital sites participating in the DI-r projects and eHealth Ontario. Of note, local RIS/PACS dictionaries unmapped to the ON DI Terminology set will result in reports and images that may not be retrievable as part of the provincial EHR.

Role	Responsibilities
Project Mapping Team (Mohawk Shared Services Inc (MSSI) - During initial mapping phase only	Creation of the ON DI Terminology Set V2.0 and supporting documentation. Mapping to SNOMED CT and submission to CHI of SNOMED CT RFCs to support V2.0. Contact with local sites to obtain local dictionaries and confirm content. Mapping Local Site DI Procedure Dictionary to the ON DI Terminology Set v2.0 following the ON DI Terminology Project Guiding Principles. Submission to eHealth Ontario of any local terms that they are unable to map to terms in the ON DI Terminology Set V2.0. Post Project documentation & knowledge transfer. Final project update to the Guiding Principles and Mapping Guidelines document and transfer of all documentation created during the project to eHealth Ontario and Canada Health Infoway.
Local System Admin	During Initial Project Phase: Supplying the ON DI Terminology Project team with Local Site DI Dictionaries and requested information; Maintenance Phase: Notification of any subsequent additions/changes to the local DI dictionaries via RFC process. Inform eHO of local or regional initiatives that impact terminology.
DI-r Clinical Lead	During Initial Project Phase: Facilitating communications between local site resources and ON DI Terminology Project Team. Maintenance Phase: Notification of any subsequent additions to the local DI dictionaries to eHealth Standards Program using the request for change process.
eHealth Ontario	During Initial Project Phase: Participate in the communications process with local hospitals. Manage RFCs coming from project team for any local terms the On Project team is unable to map to V 2.0 of the ON DI Terminology Set. Determine if new terms should be added to the ON DI Terminology Set and if new SNOMED CT terms are required. Communication to local hospitals regarding the eHealth Ontario RFC process. DI Terminology set transition to maintenance presentations, notification of changes to DI-r Clinical Lead and the requirements for supporting documentation. Maintenance Phase: Management of the Local Maps to the ON DI Terminology Set, the ON DI Terminology Set, documents to support the management of the ON DI Terminology Set and Terminology Services for the ON DICS, licensing of SNOMED CT through SC membership; notification to Canada Health Infoway Standards Collaborative (SC) of any changes to SNOMED CT required to support use by eHealth Ontario in the maps. Determination of any tools required to support the

	ON DI Terminology Set. Ensure that operational DI resources are available to support the ongoing maintenance of the ON DI Terminology Set. Addition of the GTAW local maps and any work to support the addition of ON IHF local dictionaries to the ON DI Terminology Set.
Canada Health Infoway	Canada Health Infoway (SC) is the national release center for licensing and changes to SNOMED CT in Canada. Infoway will process any RFCs received from MSSi during the mapping project and from eHealth Ontario after to support the ON DI Terminology Set. Infoway will submit the new SNOMED CT codes in the Canadian extension to IHTSDO for consideration for inclusion in SNOMED CT international.
International Health Terminology Standards Development Organization(IHTSDO)	The International Health Terminology Standards Development Organization determines global standards for health terms. The global expert in healthcare terminology ensuring SNOMED CT is accepted as the global common language for health terms. Owned and governed by 27 international members, it is a not-for-profit organization that works on behalf of the healthcare system and provides full support to global members and licensees, ensuring that the combined resources achieve significant shared benefits that resonate around the world.
Terminology Advisory Group (TAG)	A consensus management group comprising of eHealth Ontario Terminology Specialists, DI Clinical Integration Specialists and may include external subject matter experts (e.g. DI subject matter experts, Canada Health Infoway terminology subject matter experts) as required.

Glossary

Acronym	Definition
ABI	Ankle Brachial Index
AC	Acromioclavicular
AFS	Arterial Femoral Series
AVM	Arteriovenous malformation
BMD	Bone Mineral Density
CHI	Canada Health Infoway
CR	Computed Radiography
CT	Computed Tomography
CTA	Computed Tomography Angiography
DI	Diagnostic Imaging
DI-r	Diagnostic Imaging Repository
DR	Direct Radiography
DX	Digital Radiography
EHR	Electronic Health Record
EMR	Electronic Medical Record
ERCP	Endoscopic Retrograde Cholangiopancreatography
EXT	Extension
FA	Fistula
FSN	Fully Specified Name
G Tube	Gastrostomy Tube
GI	Gastrointestinal
GJ Tube	Gastrojejunostomy Tube
IAC	Internal Auditory Canal
IAM	Internal Auditory Meatus
IHTSDO	International Health Terminology Standards Development Organization
J Tube	Jejunostomy Tube

MG	Mammography
MR	Magnetic Resonance
MRCP	Magnetic Resonance Cholangiopancreatography
MRV	Magnetic Resonance Venography
NG Tube	Nasogastric Tube
NJ Tube	Nasojunostomy Tube
NM	Nuclear Medicine
ON DICS	Ontario Diagnostic Imaging Common Services Initiative
PEG tube	Percutaneous Endoscopic Gastrostomy Tube
PET	Positron Emission Tomography
PICC	Peripherally Inserted Central Catheter
RF	Fluoroscopy
RFC	Request for Change
SC	Sternoclavicular
SCT	SNOMED CT
SI	Sacroiliac
TIPS	Transjugular Intrahepatic Portosystemic Shunt
TRUS	Transrectal Ultrasonography
URU	Understandability, Reproducibility, and Usefulness
US	Ultrasound
WBI	Wrist Brachial Index
XA	Angiography
XR	General Radiography (inclusive of DR, DX & CR)