

Women's Health: Breast Cancer Screening Order Set

Order Set: Conceptual Structure

**Contract: VA118-16-D-1008, Task Order
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Department of Veterans Affairs (VA)



**Knowledge Based Systems (KBS)
Office of Informatics and Information Governance (OIIG)
Clinical Decision Support (CDS)**

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Women's Health: Breast Cancer Screening Order Set: Order Set: Conceptual Structure

by Knowledge Based Systems (KBS), Office of Informatics and Information Governance (OIIG), and Clinical Decision Support (CDS)

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Preface

Table 1. Revision History

Date	Life Cycle Event
June 11, 2018	Published
May 20, 2018	Published
March 27, 2018	Published
March 27, 2018	Reviewed
January 19, 2018	Created

Table 2. Clinical White Paper Contributors

Name	Role	Affiliation
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Table 3. Artifact Identifier

Domain	Artifact ID	Name
urn:va.gov:kbs:knart:artifact:r1	a9d27bc2-1096-5258-9198-f9ad4ae2430a	B31

Artifact Applicability

Table 4. Applicability Foci, Description and Codes

Focus	Description	Code System	Code	Value Set	Value Set Version
PatientAgeGroup	Outpatients over the age of 18	SNOMED CT	133936004 Adult (person)	N/A	N/A
PatientGender	Female outpatients	SNOMED CT	248152002 Female (finding)	N/A	N/A
ClinicalVenue	Primary Care	SNOMED CT	5351000124100 Primary care clinic (environment)	N/A	N/A
ClinicalVenue	Obstetrics/ Gynecology			N/A	N/A
ClinicalVenue	Women's Health			N/A	N/A

Models

Table 5. Model References

Referenced Model	Description
urn:solor.io:anf-model:1.0	VA Analysis Normal Form Model

Chapter 1. External Data Definitions

No externalData expression definitions and no trigger definitions are present.

Chapter 2. Expression Definitions

No expression definitions are present.

Chapter 3. Breast Cancer Screening

Based upon the patient's history, provide the appropriate detail for the screening mammography order.

<pre># Perform screening mammography actionSentence[type=elm:Instance, classType=anf:ClinicalStatement] statementType: Precoordinated Expression 385644000 Requested (qualifier value) topic: Precoordinated Expression 24623002 Screening mammography (procedure) # prompt: Brief clinical history response: String (Single) # prompt: Ordering Physician/Provider Name response: String (Single) # prompt: Ordering Physician/Provider Service/Section response: String (Single) # prompt: Ordering Physician/Provider Telephone Number response: String (Single) # prompt: Ordering Physician/Provider Pager response: String (Single) # prompt: Other Physician/Provider Name Who Should Also Receive Results response: String (Single) # prompt: Other Physician/Provider Service/Section response: String (Single) # prompt: Other Physician/Provider Telephone Number response: String (Single) # prompt: Other Physician/Provider Pager response: String (Single) # prompt: Desired date response: Timestamp (Single) # ❖ Additional views</pre>	<pre># prompt: View response: Code (Single) response range: EnumerationConstraint (List) ☞ item: Additional view # Perform Additional Mamography Screening View (Specify) actionSentence[type=elm:Instance, classType=anf:ClinicalStatement] statementType: Precoordinated Expression 385644000 Requested (qualifier value) topic: Precoordinated Expression TSR-NoCode</pre>
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Chapter 4. Tabular List

Terminology Service Request (TSR) Mappings

Table 4.1. Terminology Versions

Name	Identifier	Version
SNOMED CT	2.16.840.1.113883.6.96	United States Edition 20180301

Table 4.2. Terminology References

System	Code	Display Text ^a	References ^b
SNOMED CT	133936004 Adult (person)	Outpatients over the age of 18	1
SNOMED CT	24623002 Screening mammography (procedure)	Precoordinated Expression	1
SNOMED CT	248152002 Female (finding)	Female outpatients	1
SNOMED CT	385644000 Requested (qualifier value)	Precoordinated Expression	2
SNOMED CT	5351000124100 Primary care clinic (environment)	Primary Care	1
SNOMED CT	TSR-NoCode ^c	Precoordinated Expression	1

^aIf a code is used multiple times in the KNART, only the display text of the first instance is shown.

^bCount of the number of times the given code system and code pair is used in the KNART.

^cTSR-NoCode is a placeholder indicating a code was requested, but was not provided.

Chapter 5. Behavior Symbols

Table 5.1. Group Organizational Behavior

Symbol	Name	Definition
#	Sentence Group	A group of related alternative actions is a sentence group if the item referenced by the action is the same in all the actions, and each action simply constitutes a different variation on how to specify the details for that item. For example, two actions that could be in a SentenceGroup are "aspirin, 500 mg, 2 times per day" and "aspirin, 300 mg, 3 times per day". In both cases, aspirin is the item referenced by the action, and the two actions represent two different options for how aspirin might be ordered for the patient. Note that a SentenceGroup would almost always have an associated selection behavior of "AtMostOne", unless it's a required action, in which case, it would be "ExactlyOne".
#	Logical Group	A group with this behavior logically groups its sub-elements, and may be shown as a visual group to the end user, but it is not required to do so.
➤	Visual Group	Any group marked with this behavior should be displayed as a visual group to the end user.

Table 5.2. Group Selection Behavior

Symbol	Name	Definition
#	Any	Any number of the items in the group may be chosen, from zero to all.
#	All	All the items in the group must be selected as a single unit.
#	AllOrNone	All the items in the group are meant to be chosen as a single unit: either all must be selected by the end user, or none may be selected.
#	ExactlyOne	The end user must choose one and only one of the selectable items in the group. The user may not choose none of the items in the group.
⬠	AtMostOne	The end user may choose zero or at most one of the items in the group.
✳	OneOrMore	The end user must choose a minimum of one, and as many additional as desired.

Table 5.3. Required Behavior

Symbol	Name	Definition
◆	Must	An action with this behavior must be included in the actions processed by the end user; the end user may not choose not to include this action.
◇	Could	An action with this behavior may be included in the set of actions processed by the end user.

Symbol	Name	Definition
➤	MustUnlessDocumented	An action with this behavior must be included in the set of actions processed by the end user, unless the end user provides documentation as to why the action was not included.

Table 5.4. Precheck Behavior

Symbol	Name	Definition
▲	Yes	An action with this behavior is one of the most frequent actions that is, or should be, included by an end user, for the particular context in which the action occurs. The system displaying the action to the end user should consider "pre-checking" such an action as a convenience for the user.
#	No	An action with this behavior is one of the less frequent actions included by the end user, for the particular context in which the action occurs. The system displaying the actions to the end user would typically not "pre-check" such an action.

Table 5.5. Cardinality Behavior

Symbol	Name	Definition
◆	Single	An action with this behavior may only be completed once.
❖	Multiple	An action with this behavior may be repeated multiple times.

Table 5.6. Item Flags

Symbol	Name	Definition
☞	fillIn	This item, in a list entry, allows the user to enter a fill in value that is not present in the set of presented choices.

Table 5.7. Read Only Behavior

Symbol	Name	Definition
#	true	For a particular action or action group, specifies whether the elements are read only.

Appendix A. References

This appendix contains the list of related resources and supporting documents used in creating this KNART.

List of References

Related Resources

[CCWP] *Women's Health: Breast Cancer Screening Clinical Content White Paper*

[CSD] *Women's Health: Breast Cancer Screening Order Set Conceptual Structure Document*

[KVRpt] *Women's Health: Breast Cancer Screening Order Set KNART Validation Report*

Supporting Evidence

[Nelson 2009] H. D. Nelson et al., "Screening for Breast Cancer A Systematic Review to Update the 2009 U.S. Preventive Services Task Force Recommendation," Agency for Healthcare Research and Quality, USA, Jan. 2016. (link [<https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/breast-cancer-screening>])

[Oeffinger 2015] Oeffinger, 2015. Oeffinger KC, Fontham ETH, Etzioni R, et al. Breast Cancer Screening for Women at Average Risk: 2015 Guideline Update From the American Cancer Society. JAMA. 2015;314(15):1599-1614 (link [<https://doi.org/10.1001/jama.2015.12783>])

[Pearlman 2017] Pearlman, 2017. Pearlman M, Jeudy M, Chelmow D. Breast Cancer Risk Assessment and Screening in Average-Risk Women. OBSTETRICS AND GYNECOLOGY. 2017 Jul 1;130(1):E1-6 (link [<https://doi.org/10.1097/AOG.0000000000002158>])

[ACS 2017] American Cancer Society. American Cancer Society Breast Cancer Screening Guidelines [Internet]. 2018 [cited 2018 Jan 24]. (link [<https://www.cancer.org/health-care-professionals/american-cancer-society-prevention-early-detection-guidelines/breast-cancer-screening-guidelines.html>])