

# **Neurosurgery: Radiculopathy (Cervical) Documentation Template KNART Validation Report**

## **Documentation Template: Validation Report**

**Contract: VA118-16-D-1008, Task Order  
(TO): VA-118-16-F-1008-0007, CLIN0005AQ**

**Department of Veterans Affairs**



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

**Publication date 06/20/2018**

**Version: 1.0**

---

# Neurosurgery: Radiculopathy (Cervical) Documentation Template KNART Validation Report: Documentation Template: Validation Report

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

Publication date 06/20/2018

Copyright © 2018 B3 Group, Inc.

Copyright © 2018 Cognitive Medical Systems, Inc.

## B3 Group, Inc.

### NOTICE OF GOVERNMENT COPYRIGHT LICENSE AND UNLIMITED RIGHTS LICENSE

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License.

You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

Portions of this content are derivative works from content produced by Cognitive Medical Systems, Inc. licensed under the Apache License, Version 2.0.

Additional portions of this content are derivative works from content contributed by Motive Medical Intelligence Inc., under Creative Commons Attribution-ShareAlike 4.0.

Contributions from 2013-2018 were performed either by US Government employees, or under US Veterans Health Administration contracts.

US Veterans Health Administration contributions by government employees are work of the U.S. Government and are not subject to copyright protection in the United States. Portions contributed by government employees are USGovWork (17USC §105). Not subject to copyright.

See: <https://www.usa.gov/government-works>

Contribution by contractors to the US Veterans Health Administration during this period are contractually contributed under the Apache License, Version 2.0 and US Government sponsorship is acknowledged under Contract VA118-16-D-1008, Task Order VA11817F10080007.

## Cognitive Medical Systems, Inc.

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License.

You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

This and related content produced by Cognitive Medical Systems, Inc. licensed under the Apache License, Version 2.0 is available at: <https://bitbucket.org/cogmedsys/hl7-kas-examples>

Additional portions of this content are derivative works from content contributed by Motive Medical Intelligence Inc., under Creative Commons Attribution-ShareAlike 4.0. <https://bitbucket.org/cogmedsys/kas-source-material>

Contributions from 2013-2018 were performed either by US Government employees, or under US Veterans Health Administration contracts.

US Veterans Health Administration contributions by government employees are work of the U.S. Government and are not subject to copyright protection in the United States. Portions contributed by government employees are USGovWork (17USC §105). Not subject to copyright. See: <https://www.usa.gov/government-works>

Contribution by contractors to the US Veterans Health Administration during this period are contractually contributed under the Apache License, Version 2.0 and US Government sponsorship is acknowledged under Contract VA118-16-D-1008-0007.

---

---

## Table of Contents

1. Basic File and Well-formedness Tests .....	1
2. XSD Schema Checks .....	2
3. Schematron Checks .....	3
4. Terminology Checks via Ontoserver .....	4

---

## List of Tables

1.1. Summary .....	1
2.1. KAS Schema Validation Summary .....	2
3.1. Editorial Convention Check .....	3
4.1. Ontoserver Information .....	4
4.2. Terminology and ANF Usage .....	4
4.3. SOLOR Placeholders .....	5
4.4. Other Unresolved .....	13

---

# Chapter 1. Basic File and Well-formedness Tests

**Table 1.1. Summary**

Information	Value
File name	CDSK_KRprt_CRDT_B39CervRadi.xml
File size	175.0 KB
Type	Documentation Template
Publication Date	06/20/2018
File Modification Date	06/20/2018 11:49:49
Well-formed XML	YES
MD5	13dc3fce181f3ad2412d2867dab2ff2b

---

# Chapter 2. XSD Schema Checks

**Table 2.1. KAS Schema Validation Summary**

Information	Value
KAS Schema Version	urn:hl7-org:knowledgeartifact:r1
Schema File	knowledgedocument.xsd
Validation Errors	0

---

# Chapter 3. Schematron Checks

**Table 3.1. Editorial Convention Check**

Information	Value
Editorial Schematron Version	ISO Schematron 2016
Schema File	knart-L3-validation.sch, L3Validation.sch, KnartStyle.sch
Validation Errors	0
Validation Warnings	0

# Chapter 4. Terminology Checks via Ontoserver

**Table 4.1. Ontoserver Information**

Information		Value
Ontoserver URL		https://ontoserver.hspconsortium.org/fhir
Ontoserver Version		5.0
Date of Code Checks		06/20/2018 11:50:18
SNOMED	Version	http://snomed.info/sct/731000124108/version/20170901,http://snomed.info/sct/900000000000207008/version/20170731
	Codes	443237
LOINC	Version	2.61,2.63
	Codes	126207
RXNorm	Version	Does not exist
	Codes	0
v3 Code System EducationLevel	Version	2016-03-23
	Codes	9

**Table 4.2. Terminology and ANF Usage**

Terminology References			
Total Codes Used <sup>a</sup>		53	
Resolved <sup>b</sup>		49	
Unresolved <sup>c</sup>	4	TSR Requested Codes <sup>d</sup>	0
		SOLOR Placeholder Codes <sup>e</sup>	3
		Other Unresolved <sup>f</sup>	1
ANF Model Reference Information			
anf:ClinicalStatement		27	
anf:TSR-NoModel <sup>g</sup>		0	

<sup>a</sup>Total number of unique codes referenced in the KNART XML.

<sup>b</sup>Number of unique codes used in the KNART XML and present in ontoserver.

<sup>c</sup>Number of unique codes used in the KNART XML and not found in ontoserver.

<sup>d</sup>Number of unique code system and code pairs referenced in the KNART XML with a placeholder ('TSR-NoCode').

<sup>e</sup>Number of unique codes in uuid form referenced in the KNART XML.

<sup>f</sup>Number of other unique codes not found in ontoserver, e.g. RXNorm codes.

<sup>g</sup>KAS elements modeled as 'anf:TSR-NoModel' indicates they cannot be modeled in the current version of ANF.



**Table 4.3. SOLOR Placeholders**

	Information	Value
1	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	368
	Column	69
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: 2904f20f-aaf3-4b68-a580-d84b90f47b93
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=368column=69]
2	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	389
	Column	70
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: 2904f20f-aaf3-4b68-a580-d84b90f47b93
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=389column=70]
3	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	575
	Column	85
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=575column=85]
4	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	584
	Column	85
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=584column=85]
5	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	594
	Column	85
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=594column=85]
6	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	606
	Column	85
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a

	Information	Value
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=606column=85]
7	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	617
	Column	85
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=617column=85]
8	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	629
	Column	85
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=629column=85]
9	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	640
	Column	85
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=640column=85]
10	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	651
	Column	85
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=651column=85]
11	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	661
	Column	85
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=661column=85]
12	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	690
	Column	85

	Information	Value
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=690column=85]
13	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	699
	Column	85
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=699column=85]
14	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	708
	Column	85
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=708column=85]
15	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	717
	Column	85
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=717column=85]
16	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	726
	Column	85
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=726column=85]
17	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	755
	Column	85
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=755column=85]
18	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	765

	Information	Value
	Column	85
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=765column=85]
19	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	775
	Column	85
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=775column=85]
20	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	1319
	Column	57
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=1319column=57]
21	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	1358
	Column	82
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=1358column=82]
22	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	1387
	Column	57
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=1387column=57]
23	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	1426
	Column	82
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=1426column=82]
24	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml

	Information	Value
	Line	1452
	Column	57
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=1452column=57]
25	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	1491
	Column	82
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=1491column=82]
26	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	1520
	Column	57
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=1520column=57]
27	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	1559
	Column	82
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=1559column=82]
28	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	1662
	Column	68
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=1662column=68]
29	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	1682
	Column	82
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=1682column=82]

	Information	Value
30	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	1836
	Column	57
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=1836column=57]
31	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	1870
	Column	82
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=1870column=82]
32	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	1902
	Column	57
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=1902column=57]
33	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	1936
	Column	82
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=1936column=82]
34	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	2060
	Column	57
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=2060column=57]
35	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	2102
	Column	82
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a

	Information	Value
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=2102column=82]
36	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	2157
	Column	57
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=2157column=57]
37	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	2191
	Column	82
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=2191column=82]
38	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	2220
	Column	57
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=2220column=57]
39	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	2254
	Column	82
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=2254column=82]
40	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	2283
	Column	57
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=2283column=57]
41	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	2317
	Column	82

	Information	Value
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=2317column=82]
42	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	2346
	Column	57
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=2346column=57]
43	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	2380
	Column	82
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=2380column=82]
44	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	2409
	Column	57
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=2409column=57]
45	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	2443
	Column	82
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=2443column=82]
46	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	2460
	Column	57
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=2460column=57]
47	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	2460



	Information	Value
	Column	57
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: b0549379-fc0b-45dc-8a84-befe666432f5
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=2460column=57]
48	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	2494
	Column	82
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: a997cc03-3e99-40eb-833a-6374c7750a3a
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=2494column=82]
49	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	2494
	Column	82
	Message	TSR requested for codeSystem: http://snomed.info/sct and code: b0549379-fc0b-45dc-8a84-befe666432f5
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=2494column=82]

**Table 4.4. Other Unresolved**

	Information	Value
1	FileName	CDSK_KRprt_CRDT_B39CervRadi.xml
	Line	215
	Column	105
	Message	Code 5351000124100, codeSystem http://snomed.info/sct not found in Ontoserver.
	Reference	KNART [file:CDSK_KRprt_CRDT_B39CervRadi.xml#line=215column=105]