

SNOMED
International

Expo 2017 Tutorial

SNOMED CT Quick Start

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• INFEKTIÖS LUNGSJUKDOM

14669001

• ACUTE RENAL FAILURE
• SÍNDROME DE INSUFICIENCIA RENAL AGUDA
• NYRESVIGTSYNDROM

AGUDA



Overview

- A Few Background Notes
- A Glimpse at Benefits
- A Brief Outline of SNOMED CT Features
- How to Learn More About SNOMED CT



A Few Background Notes

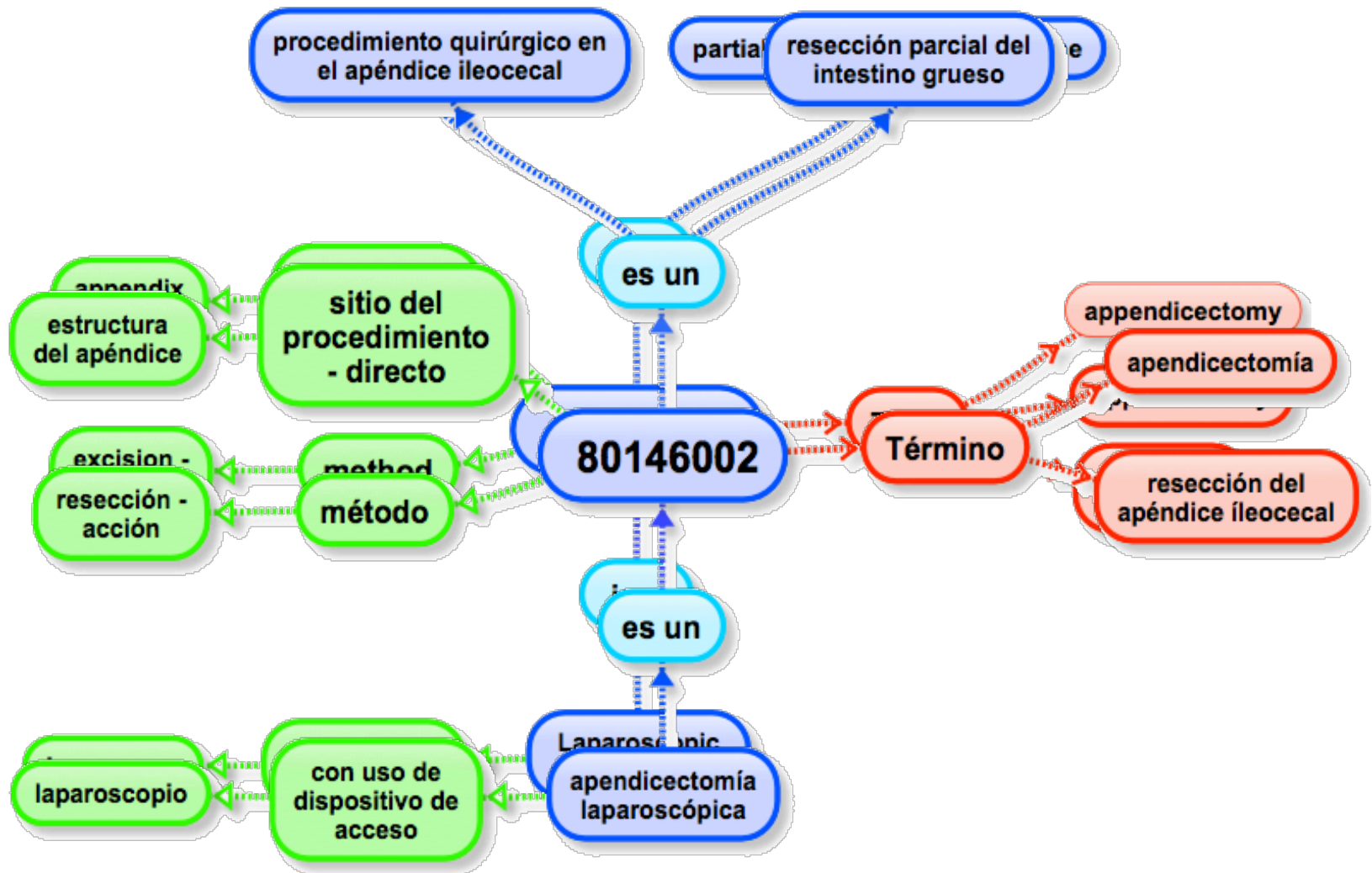


SNOMED Clinical Terms

- Most comprehensive multilingual clinical terminology
- Supports high quality clinical content in health records
- Increasing number of tools and implementations around the world
 - Used in 75 countries
 - Online SNOMED CT Browser
<https://browser.ihtsdotools.org/>
 - Examples of deployments
<http://snomedinaction.org/>

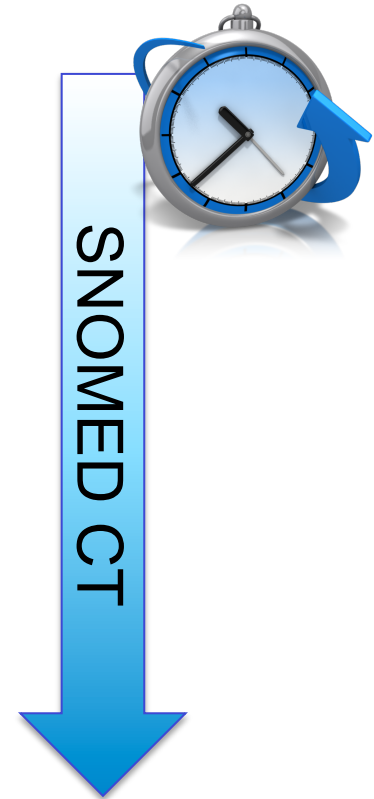


SNOMED CT – Not Just a Code System



SNOMED CT - History

- First released in 2002
 - By the College of American Pathologists (CAP)
 - Original Content from
 - Earlier versions of SNOMED (developed and owned by CAP)
 - Read Codes (owned by and widely used in the UK NHS)
- Design based on
 - Identified user requirements
 - Practical experience
 - Scientific principles established in peer reviewed publications
- Acquired by IHTSDO (SNOMED International) for the public good in 2007



SNOMED International

- An international not-for-profit organisation
 - Owned by national Members
 - Governed by General Assembly of its Members
 - Funded by countries based on national wealth
- Maintains and delivers SNOMED CT
 - Free use in Member countries
 - Low cost licenses for institutions in other countries



SNOMED International Members (October 2017)

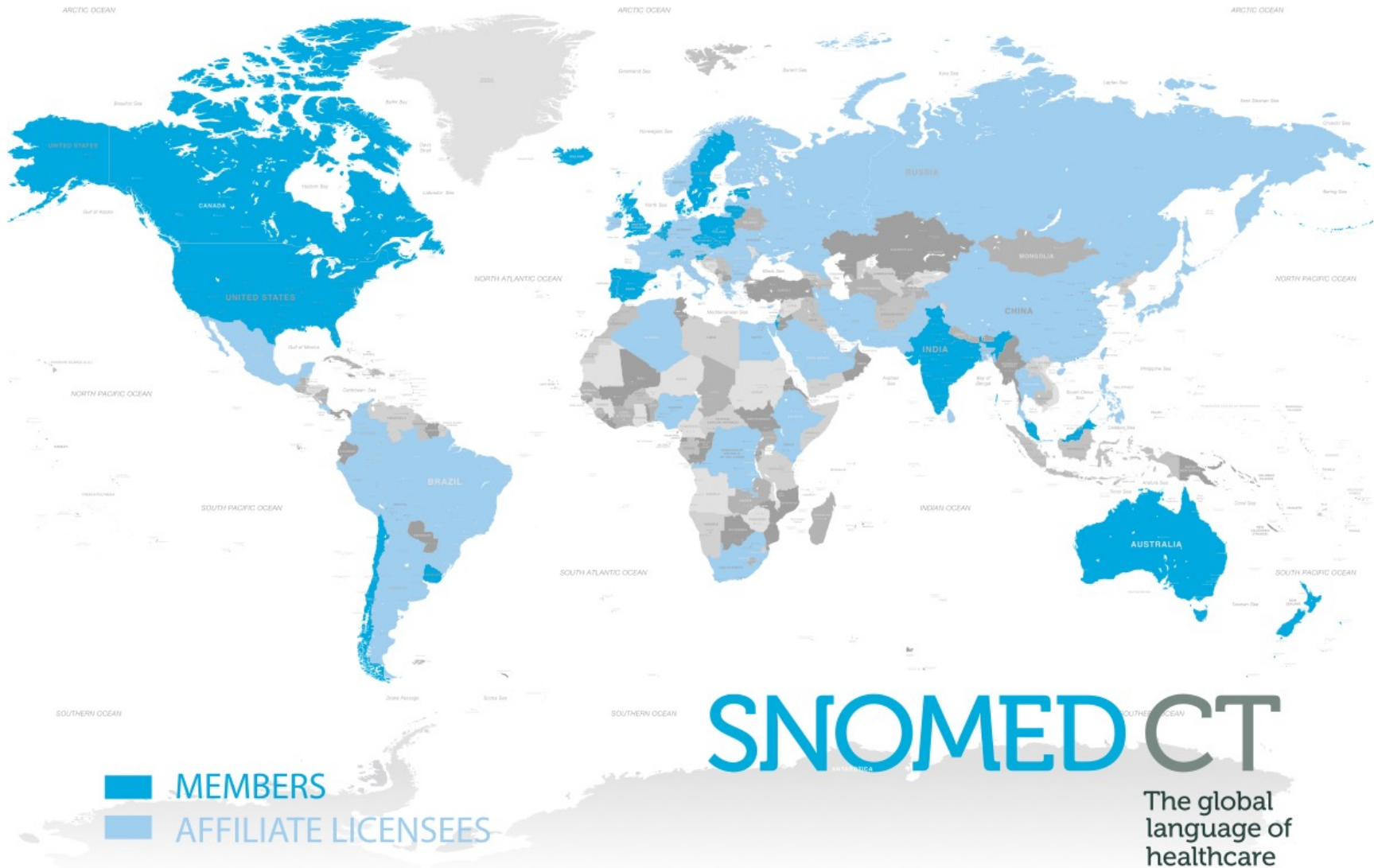
	Australia		India		Portugal
	Belgium		Ireland		Singapore
	Brunei		Israel		Slovak Republic
	Canada		Lithuania		Slovenia
	Chile		Malaysia		Spain
	Czech Republic		Malta		Sweden
	Denmark		The Netherlands		Switzerland
	Estonia		New Zealand		United Kingdom
	Hong Kong		Norway		USA
	Iceland		Poland		Uruguay

SNOMED International Membership Benefits

- Free use of SNOMED CT and related products
- Membership of General Assembly
- Ability to create national extension and translation
 - Financial support provided for translation
 - Ability to request additions to international release
- Access to global community of member countries
 - Forums and networks to learn from and share experiences
- Free new member induction
- Free education and courses
- Free open source tooling



SNOMED Members and Licensees

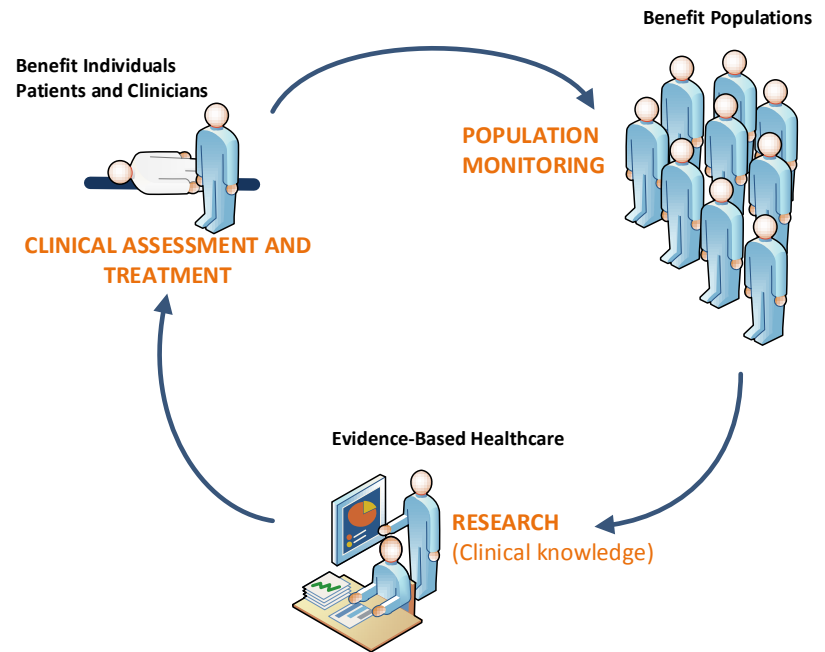


Our Vision

By 2020 clinical terminologies will be used globally, which will result in better health, supported by one language of health.



A Glimpse at Benefits



Benefits to Individual Care

- SNOMED CT may be used to
 - Improve the care of individual patients by enabling
 - Retrieval of relevant information to better support care
 - Integration with decision support, guidelines and care pathways
 - Reduction in duplication of investigations and interventions
 - Identification of patients requiring follow-up or treatment changes
 - Meaning-based sharing of clinical information



Benefits to Population Care

- SNOMED CT may be used to
 - Improve the care of populations by enabling
 - Epidemiological monitoring and reporting
 - Audit of clinical care and service delivery
 - Systems that measure and maximize the delivery of cost-effective treatments and minimize the risk of costly errors

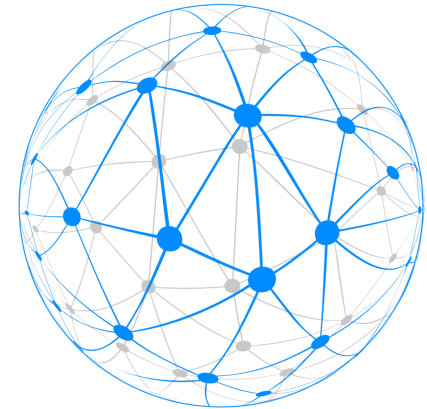


Benefits to **Clinical Research**

- SNOMED CT may be used to
 - Support evidence-based healthcare and clinical knowledge research by enabling
 - Identification of clinical trial candidates
 - Research into the effectiveness of different approaches to disease management
 - Clinical care delivery planning
 - Planning for future service delivery provision



A Quick Outline of SNOMED CT Features



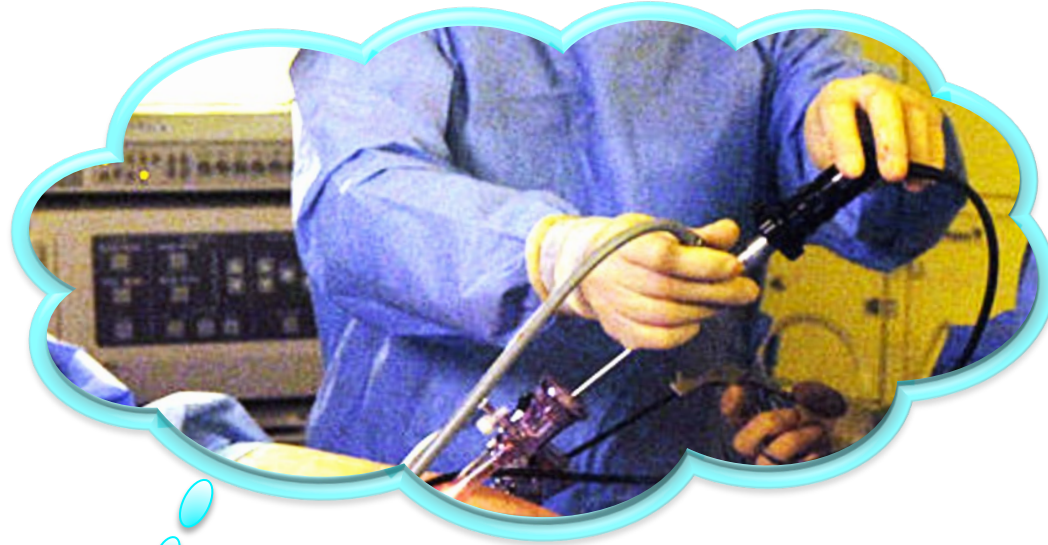
A SNOMED CT Concept is a Clinical Idea with a Unique Identifier



appendicitis

74400008

A SNOMED CT Concept is a Clinical Idea with a Unique Identifier

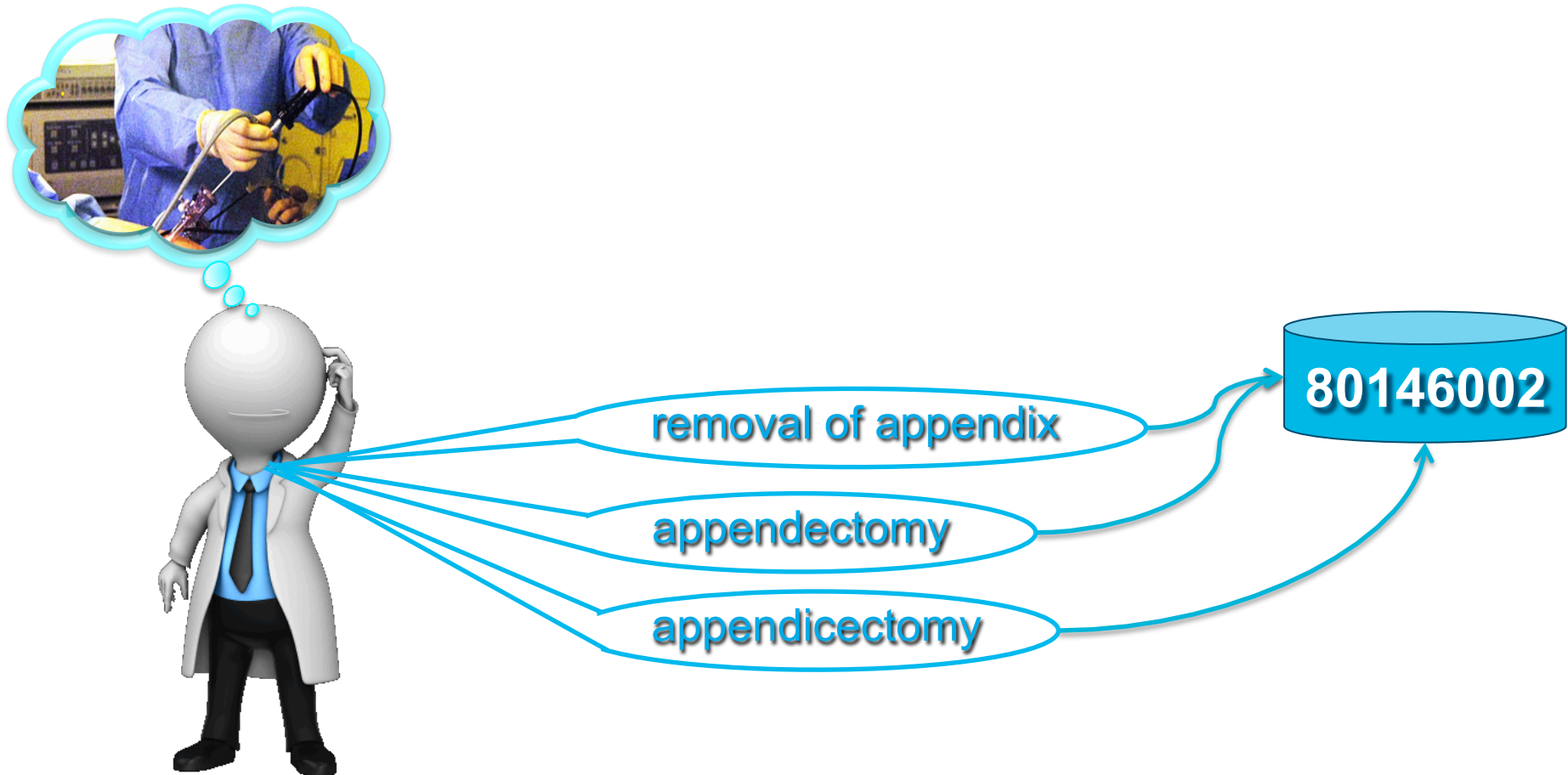


appendectomy

80146002

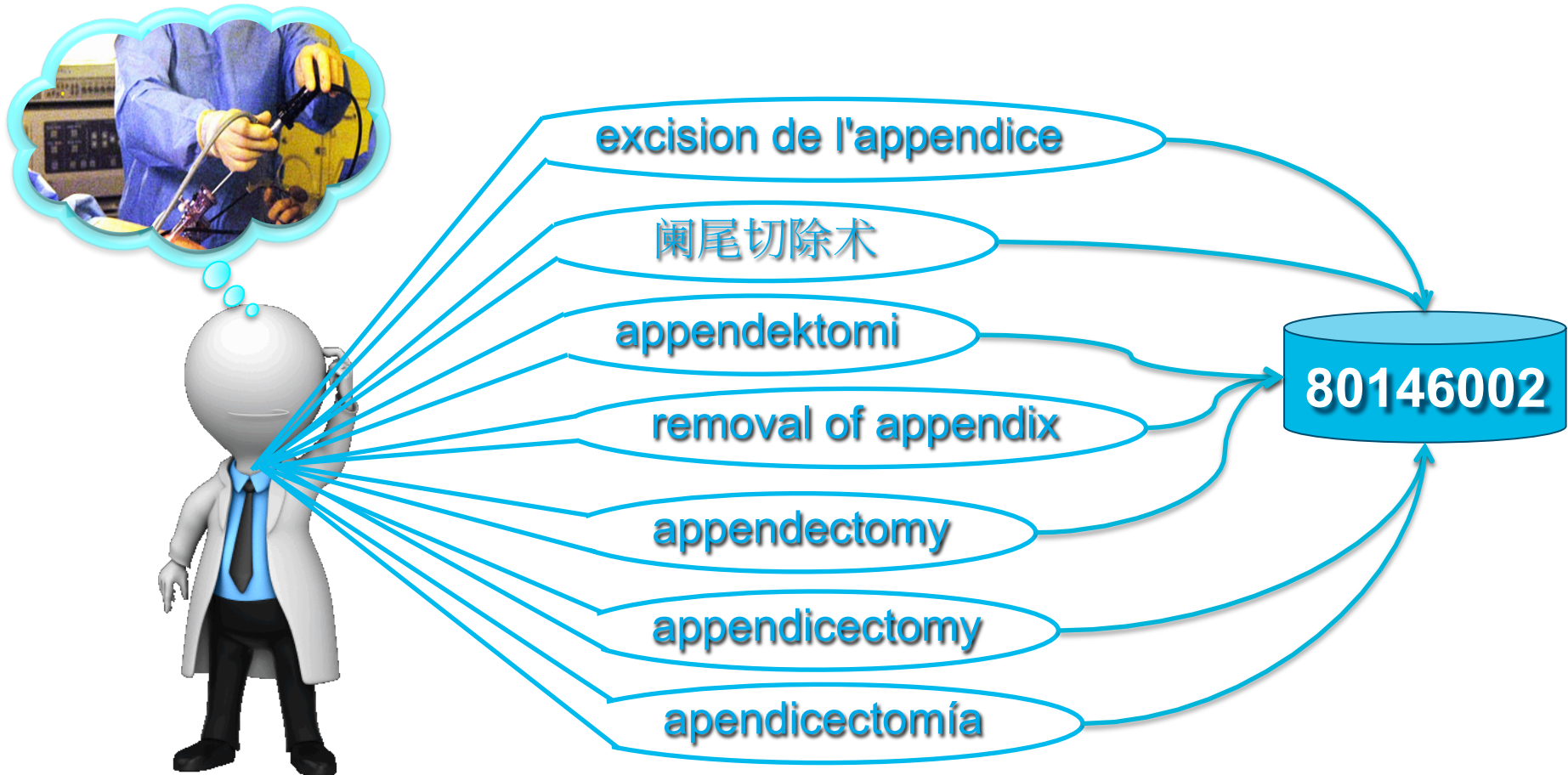
SNOMED CT is Concept Oriented

- One unique identifier (code) for each distinct concept (clinical idea)
- Terms with the same meaning are linked to the same concept identifier



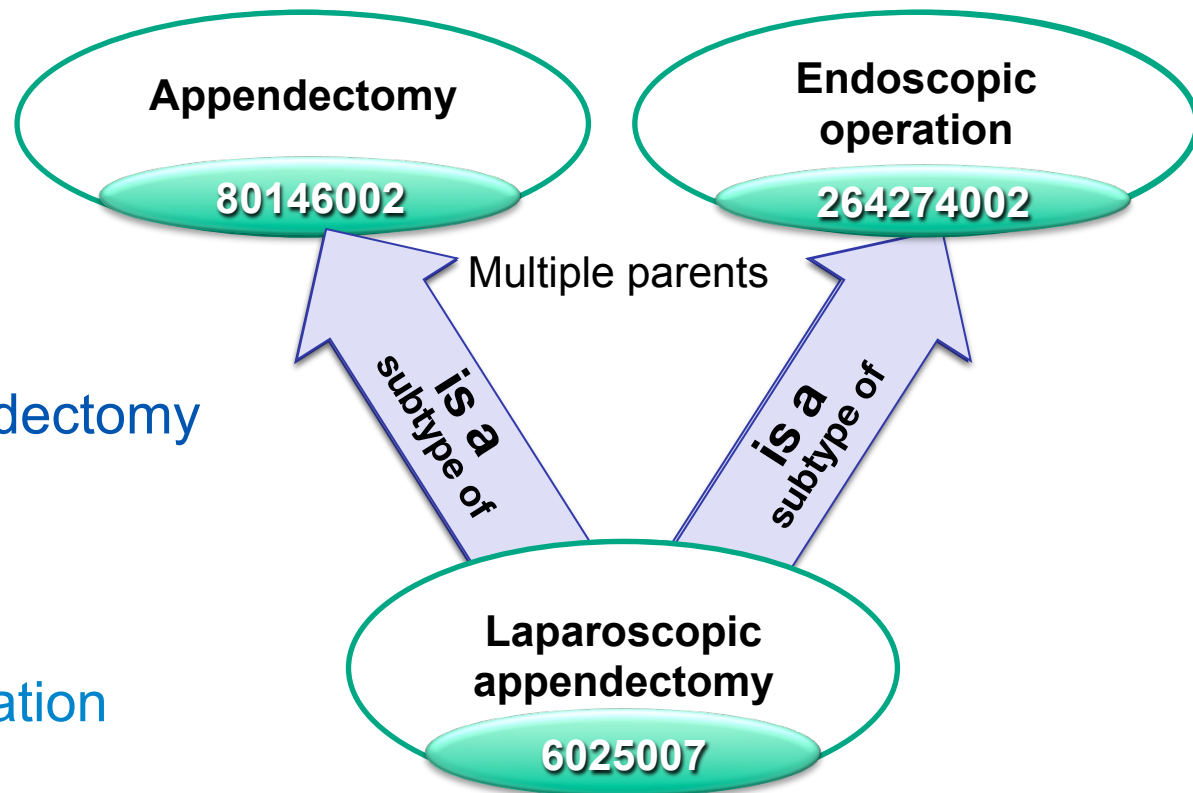
SNOMED CT is Concept Oriented

- One unique identifier (code) for each distinct concept (clinical idea)
- Terms with the same meaning are linked to the same concept identifier and those linked terms may be in different languages or dialects



SNOMED CT has a Subtype Polyhierarchy

- In a polyhierarchy each concept can be related to several parent concepts
- Each parent represents a more general concept



Example

- Laparoscopic appendectomy is a subtype of
 - Appendectomyand is a subtype of
 - Endoscopic operation

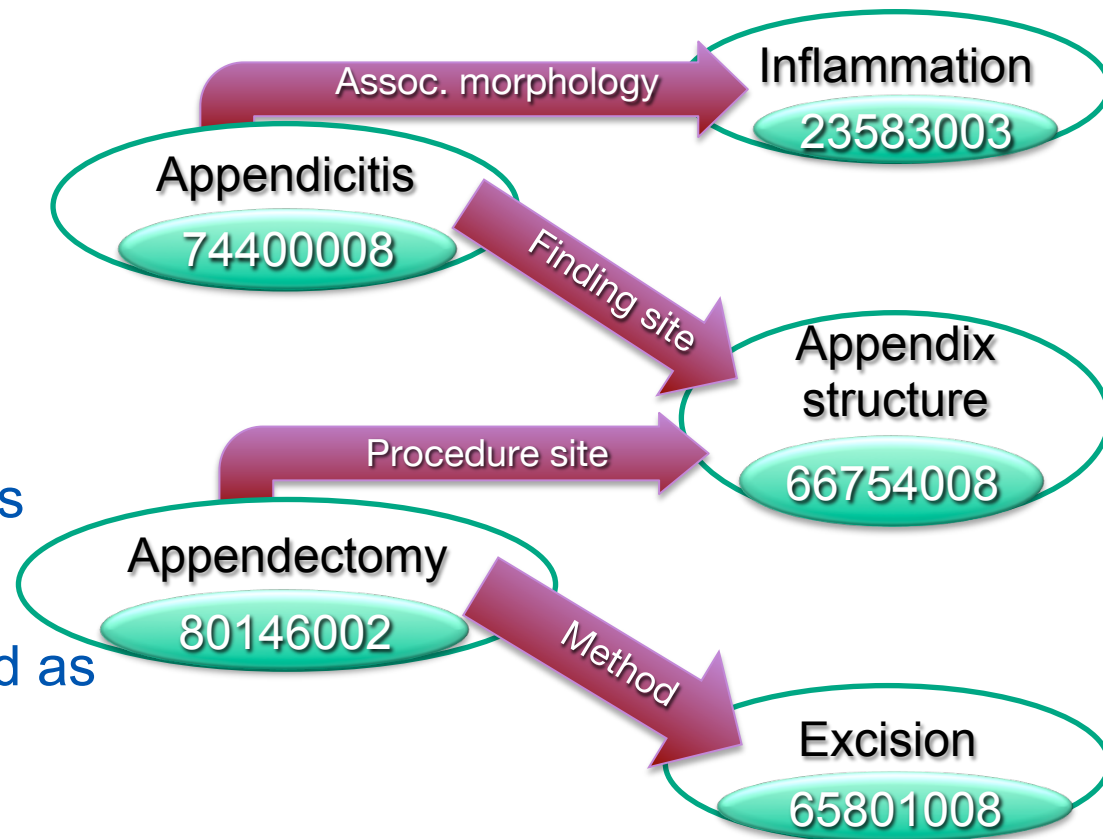
Design Features of SNOMED CT

Formal Description Logic Definitions

Description logic definitions formally represent the meaning of concepts

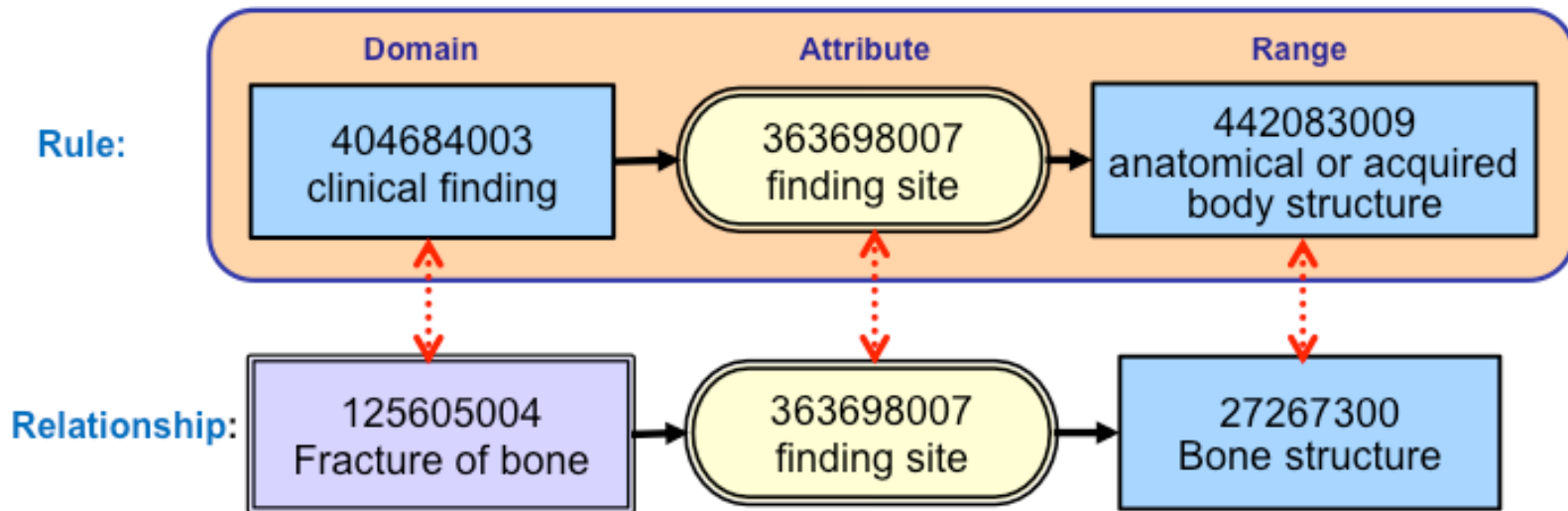
Examples

- Appendicitis is defined as
 - Inflammation of the
 - Appendix structure
- Appendectomy is defined as
 - Excision of the
 - Appendix structure



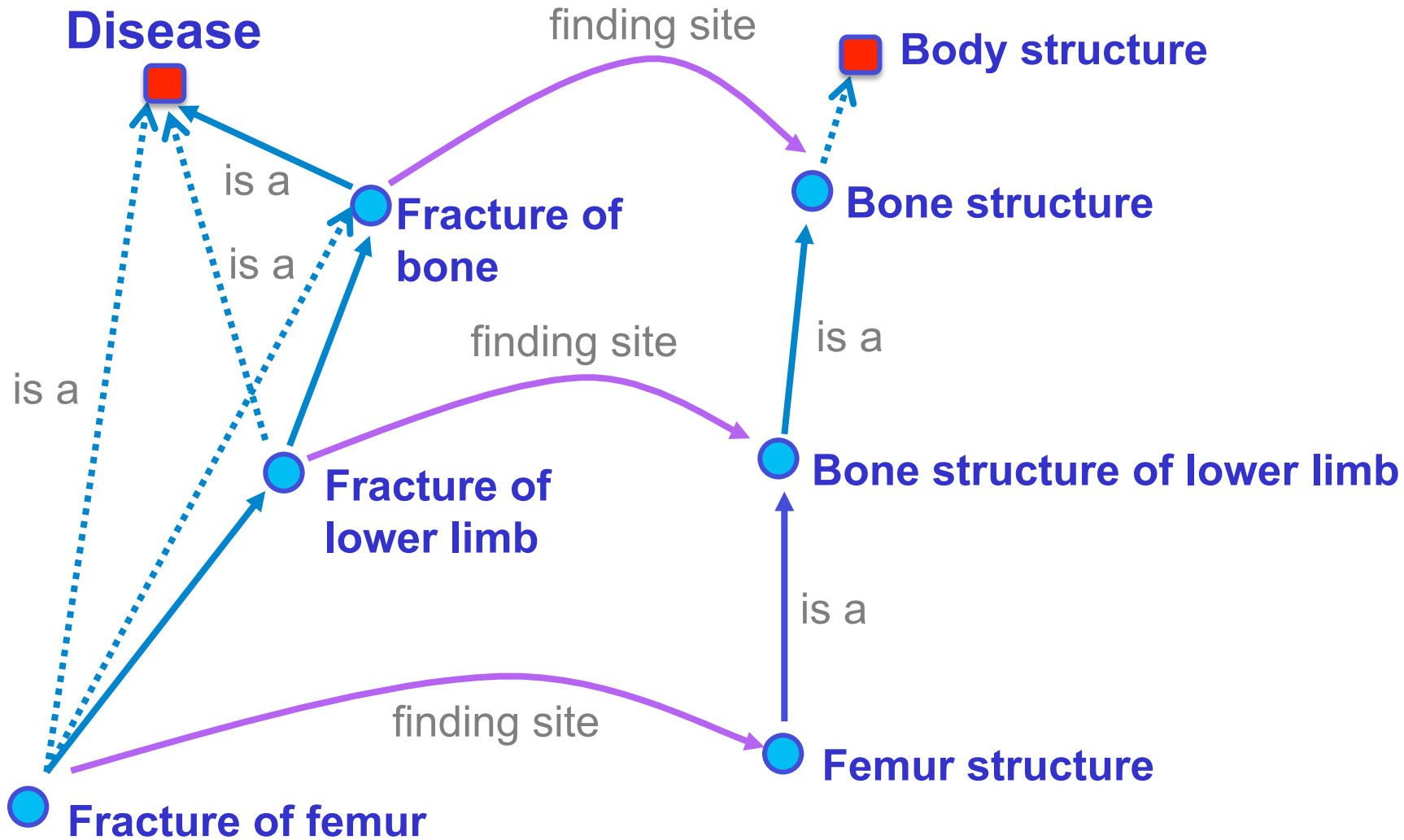
SNOMED CT Concept Model

- The concept model specifies rules on the way concepts of particular types can be formally defined
- For example



- The Machine Readable Concept Model (MRCM) is a computer processable representation of the Concept Model rules distributed with the International Edition of SNOMED CT

Description Logic – Inferred Relationships



SNOMED CT is Designed to be Customizable

- SNOMED CT covers a broad scope at clinically appropriate levels of detail ... so it is large
 - Which is essential for a comprehensive terminology
 - But many practical uses only need part of the terminology
 - And some tasks need additional configuration or mapping data
- Reference Sets are a standard mechanism for customizing SNOMED CT for specific requirements
 - Supported customizations include
 - Language and dialect preferences
 - Specification of subsets of concepts for particular uses
 - Ordered list to assist efficient user interface design
 - Maps to or from other code systems



SNOMED CT is Designed to be Extensible

- SNOMED CT International Edition addresses multinational requirements for representing clinical information
 - Additional concepts may be required by some countries, regions or institutions
 - National or local priority areas may early addition of new content that is not a priority at the international level
- SNOMED International permits its members and licensees to extend the International Edition with national or local content
 - Authorized organizations are assigned a unique *extension namespace* which enables them to generate unique SNOMED CT identifiers
 - This allows them to create their own concepts, descriptions, relationships and reference sets and distribute these as part of their SNOMED CT Extension



Learning More About SNOMED CT



Learning More About SNOMED CT at the Expo

Expo 2017 Tutorials

Thursday

11:30	Introduction to SNOMED CT	(60 min)
13:30	SNOMED CT Implementation Roadmap	(90 min)
15:30	Introduction to SNOMED CT Translation	(45 min)
16:15	Introduction to Mapping	(45 min)

Friday

11:00	SNOMED CT Analytics and Decision Support	(90 min)
13:30	Practical Guide to SNOMED CT Reference Sets	(90 min)

Presentation Streams

A - SNOMED in Action

B - Enhancing Clinical Practice using SNOMED CT

C - Leveraging SNOMED CT

Learning More About SNOMED Online

- SNOMED E-Learning: <http://snomed.org/elearning>
 - Create a free account
 - Enroll on a course or browse our learning materials
- SNOMED E-Learning
 - Formal Courses with Assessments
 - Foundation
 - Implementation
 - Content Development
 - Self Guided Learning Pathways
 - Data Analysts
 - Developers
 - Open Access
 - All account holders have access to ~100 presentations

Learning More SNOMED CT Document Library <http://snomed.org/doc>

- **Introductory Guides**
 - Starter Guide <http://snomed.org/sg>
 - Vendor Introduction <http://snomed.org/vendorintro>
 - Member (NRC) Guide <http://snomed.org/nrcguide>
- **Specifications and Technical Guidance**
 - Release file specifications
 - Computable language specifications
 - Terminology and record services
- **Practical Guides**
 - Search
 - Data Entry
 - Analytics
 - Decision Support
 - Reference Sets
 - Extensions*
[*draft by end 2017]
- **Explore SNOMED CT Content**
 - <http://snomed.org/browser>

Any Questions?

Enjoy the Expo!

