

CLASS HIERARCHY

owl:Thing

- BodyPart
 - BloodVessel
 - Bone
 - InternalOrgan
 - Joint
 - Nerve
 - Skin
 - Tissue
 - Ligament
 - Muscle
 - SubcutaneousTissue
 - Tendon
- Contaminant
 - Bacterial
 - Debris
 - Dirt
 - NonBacterial
 - Clostridium
 - Staphylococcus
 - Streptococcus
- Injury
 - Bite
 - HumanBite
 - AnimalBite
 - CarAccident
 - Complication
 - Hemorrhage
 - Infection
 - Cellulitis
 - Gas gangrene
 - Sepsis
 - Staphylococcus infection
 - Streptococcus infection
 - Tetanus
 - Scarring
 - KeloidScar
 - Crushing
 - DirectBlow
 - Fall
 - SharpObjectInjury

- MedicalSupply
 - Antiseptic
 - Bandage
 - Gauze
 - Scalpel
 - Staple
 - Suture
- Symptom
 - Bleeding
 - Fever
 - Pain
 - Pus
 - Redness
 - Swelling
- Treatment
 - FirstAid
 - Bandaging
 - Cleaning
 - DirectPressure
 - Elevation
 - Rest
 - MedicalTreatment
 - Debridement
 - SkinGlue
 - Stapling
 - Surgery
 - Suturing
 - Medication
 - Antibiotic
 - PainRelief
 - TetanusShot
- Wound
 - ClosedWound
 - Contusion
 - Fracture
 - Hematoma
 - OpenWound
 - Abrasion
 - Avulsion
 - ChronicWound
 - Sore
 - Ulcer
 - Laceration
 - Puncture

- SurgicalWound
 - Class_I_Clean
 - Class_II_CleanContaminated
 - Class_III_Contaminated
 - Class_IV_DirtyContaminated

OBJECT PROPERTIES

- hasLocation
Domain: Injury/Wound
Range: BodyPart
- requiredTreatment
Domain: Injury/Wound
Range: Treatment
- usesMedicalSupply
Domain: Treatment
Range: MedicalSupply
- hasSymptom
Domain: Injury/Wound
Range: Symptom
- contaminatedBy
Domain: Wound
Range: Contaminant
- causedBy
Domain: Injury
Range: Source (e.g., SharpObject)

DATA PROPERTIES

hasDepth : decimal

severityLevel : string

isInfected : boolean

needsStitches : boolean

isContaminated : boolean

isPainful : boolean

AXIOMS AND CONSTRAINTS

OpenWound is disjoint from ClosedWound

Symptom is disjoint from Treatment

Bacterial is disjoint from NonBacterial

hasDepth has a property of OpenWound

Treatment, Contaminant, BodyPart, Symptom are disjoint with each other

Medication, MedicalTreatment, FirstAid are disjoint from each other

DL QUERIES TO DEFEND

1. Wound and (hasLocation value skin_forearm01) and ((usesMedicalSupply some Gauze) or (requiredTreatment some (usesMedicalSupply some Gauze)))

2. OpenWound
and
((isInfected value true)
or
(contaminatedBy some Bacterial)
)
and (requiredTreatment some (usesMedicalSupply some MedicalSupply))