Domain Expert Annotation Manual

Annotation page can be accessed at: https://d371-34-212-40-25.ngrok-free.app/

General Guidelines

- Please Include treatment to IEM only:
 Include Treatment details if they are directly relevant to the IEM diagnosis.
- **Please select complete phrases:** When annotating, capture entire phrases or sentences. Avoid splitting entities into separate parts; for example, if "elevated blood pressure of 140/90 mmHg" is mentioned, select the full phrase rather than isolating "blood pressure" and "140/90 mmHg."
- **Flexible labeling:** Information can fit into multiple categories or none at all. If a piece of information is relevant to more than one label, apply all applicable labels. If it does not fit any label, you may leave it unannotated.



Selecting Labels and Highlighting Text:

• **Select each label** that describes a span of text and highlight the corresponding words. There are **20 categories** available (see Figure 1).

Figure 1

```
AGE (OF ONSET) 1
                  AGE (AT CASE PRESENTATION) 2
                                                DDX 3
CONFIRMED_DIAGNOSIS(IEM) 4
PREGNANCY (NEONATAL, MATERNAL AND PREGNANCY HEALTH) 5
VITALS_HEMA (VITALS AND HEMATOLOGY) 6
                                        IMMUNE 7
NEURO (INCLUDE CNS, PNS AND COGNITIVE) 8
                                          EENT 9
CVS (INCLUDE CARDIOCEREBRAL) 10
                                 RESP 11
GU (INCLUDE NEPHROLOGY) 13
                            DERM (INCLUDE BREASTS) 14
        LYMPH (LYMPHATIC SYSTEM) 16
                                       ENDO 17
                                                LAB_IMAGE 18
HISTORY (CC, PMHX, SURGICAL HX, HPI, FAMILY, SOCIAL AND GENETIC
HX) 19
IEM_TREATMENT 20
```

Selecting and Deselecting Labels:

- To apply a label, click on the desired label below the highlighted phrase or sentence.
- To **deselect**, simply click on the label again.

Labeling Guidelines:

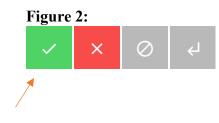
- You can apply one label at a time, but a piece of text can match **none**, **one**, **or multiple** labels
- For each labeled snippet, click the green "tick" mark at the bottom to confirm and move to the next snippet (see Figure 2).
- If you would like to revisit the case snippet at a later time, click on pause to skip to the next case first

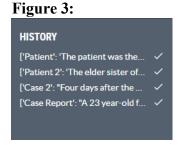
Reviewing Completed Work:

• Your completed work appears in the History (Figure 3) bar. You can review up to **20** previous snippets.

Saving Your Work:

• Click the **Save** icon (see Figure 4) to save your progress. **Important:** Once saved, all history will be cleared, and you won't be able to revisit previously completed snippets.







Category Descriptions

1. Pregnancy-Related Information (Pregnancy):

- 1. **Neonatal Health**: Record observations, conditions, or diagnostic findings specific to the infant's health.
- 2. **Maternal Health**: Document the mother's health observations during pregnancy, excluding treatment details.

2. Vital Signs and Hematology (Vitals Hema):

- 1. **Vital Signs**: Include precise measurements of temperature, pulse, respiratory rate, blood pressure, and oxygen saturation (SpO2), along with units.
- 2. **Hematology**: Document hematological conditions (e.g., anemia) and list blood test measurements such as hemoglobin, WBC count, and platelet count.

3. Neurological and Cognitive Findings (Neuro):

- 1. **Neurological Findings**: Record specific observations or diagnoses related to neurological function.
- 2. **Cognitive Findings**: Document any cognitive impairments or assessments.

4. Eyes, Ears, Nose, and Throat (EENT):

1. **Eyes, Ears, Nose, Throat Findings**: Include observations or symptoms related specifically to each structure.

5. Cardiovascular and Cerebrovascular System (CVS):

- 1. **Cardiac Findings**: List observations, signs, or symptoms directly related to the heart and cardiac function.
- 2. **Vascular Findings**: Document vascular observations, including blood vessel-related conditions.

6. Respiratory System (RESP):

1. **Respiratory Findings**: Record observations or symptoms directly related to respiratory function.

7. Gastrointestinal System (GI):

1. **Gastrointestinal Findings**: Document observations, signs, or symptoms specific to the gastrointestinal system.

8. Genitourinary System (GU):

- 1. **Urinary Findings**: Include observations specific to the urinary tract.
- 2. **Genital Findings**: Document conditions specific to the genital organs.

9. **Dermatological Findings (DERM)**:

- 1. **Skin Conditions**: Include observations specific to skin conditions.
- 2. **Facial Features**: Document any noteworthy observations related to facial features.
- 3. **Breast Findings**: List any breast-related observations or conditions.

10. Musculoskeletal System (MSK):

- 1. **Muscle Findings**: Record any observations or conditions related to muscle health.
- 2. Skeletal Findings: Include observations specific to bones and joints.

11. Lymphatic System (LYMPH):

- 1. **Adenoid, Tonsils, and Lymphatic Tissues**: Record observations for each lymphatic structure individually.
- 2. **Lymph Nodes, Thymus, Bone Marrow, Spleen**: Document findings specific to each structure.
- 3. **Immune Cell Findings**: List immune cell-related observations or counts.

12. Endocrine System (ENDO):

- 1. **Endocrine Gland Findings**: Document any observations related to endocrine glands such as thyroid, adrenal glands, pancreas, etc.
- 13. Laboratory and Imaging Results (Lab & Image)
- 14. Patient History (History):
 - 1. **Chief Complaint (CC)**: Document the primary reason for seeking medical attention.
 - 2. **Past Medical History (PMHx)**: Include known past medical conditions or diagnoses.
 - 3. Past Surgical History: List previous surgical procedures and outcomes.
 - 4. **History of Present Illness (HPI)**: Provide a detailed narrative of the development of the current illness.
 - 5. **Family and Genetics History**: Include any family history of genetic conditions or hereditary diseases.
 - 6. **Social History**: Document lifestyle factors such as smoking, alcohol use, occupation, and living conditions.

References:

Span Categorization (https://prodi.gy/docs/span-categorization)

Interface Functions: (https://prodi.gy/docs/api-web-app)

Amendments for Reconciliation

Negative Findings

• Include negative findings (e.g., "normal development," "no dark urine") to ensure a comprehensive record of what has been assessed. This avoids ambiguity and supports diagnostic precision.

Dental Manifestations

- **EENT**: Categorize dental conditions involving the teeth, gums, or soft tissues of the oral cavity under EENT. Examples include dental caries, periodontal disease, oral infections, and abscesses.
- MSK: Use MSK for conditions affecting the jawbone, temporomandibular joint (TMJ), or surrounding musculoskeletal structures. Examples include jaw fractures, TMJ disorders, or structural abnormalities of the jaw.
- **Recommendation**: Prioritize categorizing dental conditions under EENT unless explicitly related to the skeletal framework (e.g., jaw or TMJ).

History Section

- **Prioritize PMH and Surgical History**: Ensure exhaustive listing of past medical and surgical histories, as they provide critical diagnostic information. Include all relevant conditions and surgeries verbatim.
- **HPI and Chief Complaint**: Focus on concise summaries of the chief complaint, its onset, progression, and associated symptoms. Avoid excessive narratives unless they provide significant diagnostic value.
- Family and Social History: Keep these sections concise, focusing on elements directly relevant to the diagnosis.

GU vs. Endocrine System

- Endocrine (ENDO):
 - o Use for endocrine gland dysfunctions or hormonal disorders.
 - o Include systemic manifestations originating from endocrine dysfunction affecting genital organs (e.g., congenital adrenal hyperplasia, hypogonadism).
 - Lab tests or imaging related to endocrine issues should remain categorized under "Lab Image."
- **GU**:
 - Use for structural, infectious, or non-hormonal genital abnormalities (e.g., UTI, structural genital conditions).
 - o Contexts related to menstruation should be categorized based on the underlying cause:
 - Hormonal cause \rightarrow **ENDO**.
 - Structural or infectious cause \rightarrow **GU**.

Musculoskeletal (MSK) Observations

• **Muscle Weakness**: Categorize muscle strength observations under NEURO by default unless explicitly attributed to muscle-specific conditions (e.g., injury, myopathy).

ECG Placement

• Include ECG findings under the **Lab_Image** category. While ECG is not a conventional imaging modality like MRI or CT, its diagnostic data aligns with other lab-based results.