The TMUCRD-mapped OMOP-OHDSI is used to build a CRLM prediction model with an AUC of 0.868.

**Title: Predicting Colorectal Cancer Liver Metastases using TMUCRD-Mapped OMOP CDM**

**Background:** Liver Metastases is one of the most prevalent malignancies that cause mortality among colorectal cancer patients where 25-30% affected by the malignancy worldwide. Predicting the occurrence of colorectal cancer liver metastases (CRLM) could benefitting physician on deciding the diagnoses. We create a prediction model by using machine learning on the electronic health record to discover susceptible characteristics for secondary malignant neoplasm of liver cancer in colorectal cancer patients.

**Methods**

1. TMUCRD mapped into OMOP-OHDSI
   - TMUH
   - SHH
   - WFH
   - TMUCRD
   - TMUCRD-mapped OMOP CDM OHDSI

2. Connected to ATLAS
   - Concept Sets & Cohort Definition
   - TMUCR_CRC_NEW
   - connected

3. Create package prediction models using ATLAS Prediction
   - Concept Sets & Cohort Definition
   - TMUCR_CRC_NEW
   - create

4. Run in RStudio Shiny
   - OHDSI
   - AUROC
   - Incidence
   - Specificity
   - Sensitivity
   - PPV
   - NPV

**Limitation:** Lack of specific cancer parameters (e.g. cancer stages, cancer site, and cancer size) on Cohort Definition on ATLAS, might hinderance our model performances to achieve higher performance.

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