Supplementary Material

A. Data appendix

Journal	#papers
Acta Oncologia	5,846
British Journal of Cancer	306
radiation oncology journal	2,810
Journal of Clinical Oncology	522
Journal of Hematology and Oncology	1,103
Lancet	1,110
Nature Reviews Clinical Oncology	195
Radiation Oncology	775
Radiologica Medica	1,873
Strahlentherapy and Onkologie	2,985
Technology in Cancer and Research	1,886
Technology in Cancer Research and Treatment	388
Total	**19,799**

Table 1: Statistics of text corpus for oncology-domain

The biomedical KG defines 18 entity types in the medical domain, including anatomy, neoplastic process, microorganism, eukaryote, physiology, chemical or drug, diagnostic procedure, laboratory procedure, research activity or technique, therapeutic or preventive procedure, medical device, research device, pathology, disease or syndrome, anatomical abnormality, mental or behavioral dysfunction, injury or poisoning and sign, symptom or finding.

Meanwhile, 19 relationship types are defined in the biomedical KG including "is_a", "reverse_is_a", "is_part_of", "reverse_is_part_of", "may_treat", "reverse_may_treat", "found_in", "reverse_found_in", "may_cause", "reverse_may_cause", "expressed_in", "is_expression_of", "encodes", "encoded_by", "significant_drug_interaction", "involved_in_biological_process", "biological_process_involves", "is_active_ingredient_in", "has_active_ingredient".

Links of coarse-domain KG and pre-trained language models (PLMs):
coarse-domain KG (BIOS 2022v1(beta)): https://bios.idea.edu.cn/Download
emilyalsentzer-Bio_ClinicalBERT: https://huggingface.co/emilyalsentzer/Bio_ClinicalBERT
allenai-biomed_roberta_base: https://huggingface.co/allenai/biomed_roberta_base
bert-base-uncased: https://huggingface.co/bert-base-uncased

B. Knowledge graph display
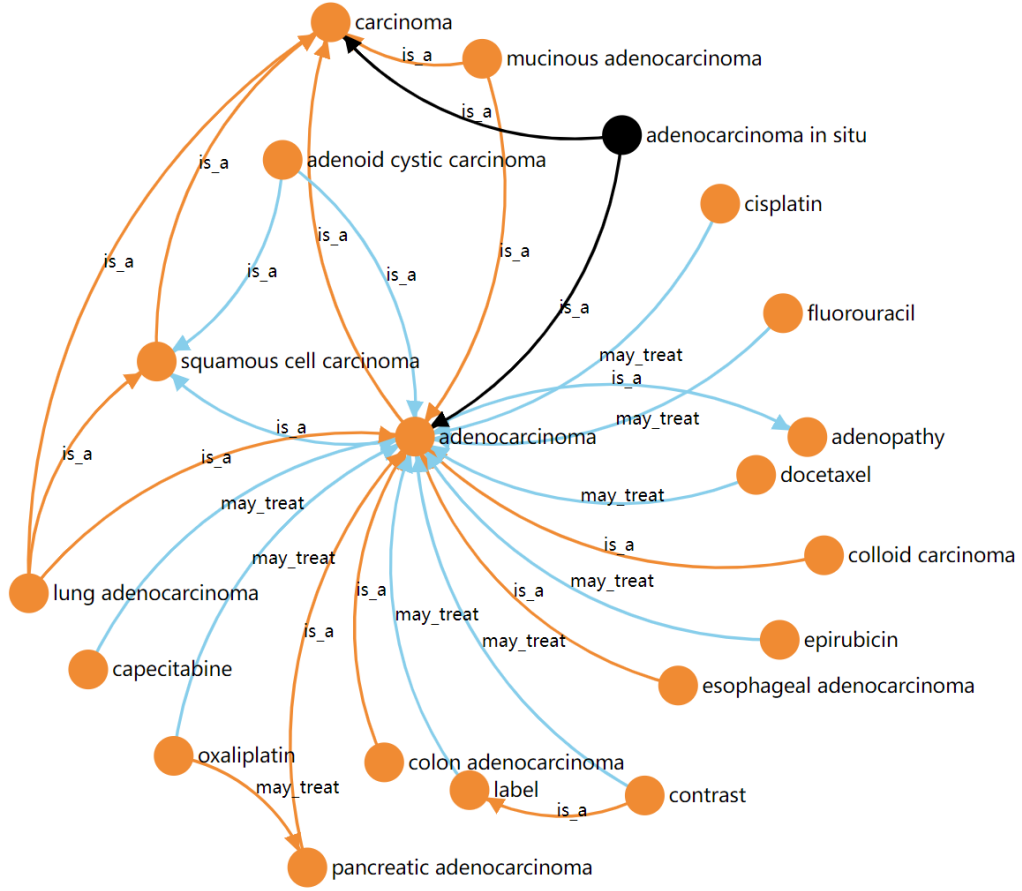
Knowledge graph of the *adenocarcinoma*. The orange edges represent the overlapping triples $\mathbb{T}_O$, the blue edges denote the triples of new relations $\mathbb{T}_R$, and the black edges denote the triples of new entities $\mathbb{T}_E$, while the black node represents the new entity. For visual presentation, we only show 20 related entities which relationship type is *is_a* or *may_treat*.