May 20, 2017

RUTGERS ONCOLOGY OLYMPIAD

Team Event Resource Guide

The following contains a brief list of topics which will be tested during the team event. More resources will continue to be added on Sakai.

General Cancer Knowledge

- National Cancer Institute at the National Institutes of Health
  - https://www.cancer.gov/
  - Due to the extensive information regarding different cancers present on this resource, topics listed below should be focused on, but this list is not exhaustive.

    - Causes
    - Diagnosis
    - Risk Factors
    - Screening
    - Staging
    - Statistics
    - Symptoms
    - Treatment Options

    - Bone Cancer
    - Brain Cancer
    - Breast Cancer
    - Leukemia
    - Lung Cancer
    - Lymphomas
    - Pancreatic Cancer
    - Skin Cancers

Careers Relating to Oncology

- Biostatistician
- Clinical Psychologist
- Clinical Research Coordinator
- Dietitian/Nutritionist
- Epidemiologist
- Genetic Counselor
- Medical Writer
- Nurse Practitioner
- Oncologist
- Pathologist
- Pharmacist
- Phlebotomist
- Plastic Surgeon
- Radiation Oncologist
- Registered Nurse
- Social Worker
- Surgeon
- Translational Researcher

For information regarding career profiles, please go to http://www.decodingcancer.org/career-spotlight.

Cancer Innovations

Become familiar with innovations that lead to cancer understanding, research and development. From 1953 DNA is a double helix to 2014 HPV vaccination. Resources will be posted on Sakai regarding particular innovations and researchers.

Cancer Genetics

Be able to translate and transcribe known founder mutations on BRCA gene sequence. Practice sequences founded on Sakai

Diagnostic Tools

- Mammogram
- MRI
- Ultrasound
- Biopsy
- PET/CT
- Endoscopy
- Genetic Testing
- Laboratory Test

Be able to identify images of tools, determine the materials/technology used, when it should be used, and what it can show.

Treatment Options

- Biological Therapy
- Chemotherapy
- Hormone Therapy
- Radiation Therapy
- Surgery

For treatments, focus on the impact on cell activity, materials/equipment used, side effects, and when it is used. Understand the use of clinical trials in treatment.

Pathology Reports

- Specimen(s) Received
- Clinical History
- Gross Description
- Specimen Type/Size
- Laterality
- Tumor Size
- Final Diagnosis
- Histologic Grade
- Stage
- Number of (Positive) Nodes
- Lymphovascular Invasion
- Procedures/Addenda

For pathology reports, understand how to read/interpret the report along with key terms.

Case Study

For the case study, understand the path a typical patient undergoes from diagnosis to treatment to recovery. More information regarding the case study will be released on Sakai.

Pedigree

For pedigrees, focus on what information can be obtained, the different symbols, and genetic counseling.