

# Trial/Pilot Event – 2019 Southeast Pennsylvania Region

## SCIENCE OF CANCER B/C Trial Event Rules

**DESCRIPTION:** Teams of 2 students will answer questions involving content knowledge and process skills in topics related to the science behind cancer.

**A TEAM OF UP TO:** 2

**APPROXIMATE TIME:** 45 minutes

**THE COMPETITION:** Science of Cancer is a timed paper test. PowerPoint slides containing questions and images will be provided to test knowledge of science related to the topics of Skin Cancer, Breast Cancer, and Lung Cancer. Each team may bring three 8.5 x 11 inch pieces of paper with information printed on both sides. Material provided can be divided up among the students on each team with all final answers recorded on one answer sheet provided. Topics that may be included on the exam are listed in the table below. No cell phones may be used during this event.

- Each team will be given one answer sheet on which they will record answers to each section.
- Each picture will have one or more questions accompanying it on some aspect of the science behind cancer development, statistics, genetics, risk factors, diagnosis, treatment, and prevention.

### Suggested Resources

American Cancer Society: <http://www.cancer.org>

Centers for Disease Control skin cancer page: <http://www.cdc.gov/cancer/>

Skin Cancer Foundation: <http://www.skincancer.org/>

HHMI Biointeractive: <https://www.hhmi.org/sites/default/files/Biointeractive/Outreach/NABT%20Cancer2.pdf>

### SAMPLE QUESTIONS:

- Name the most common type of each cancer.
- Describe errors in the cell cycle that results in uncontrollable cell growth and tumor formation.
- Which type of treatment is used based on the specific type of cancer?
- What are some steps that one can take to minimize the risk of getting cancer?

### SCORING:

- High score wins.
- Points will be awarded for the quality and accuracy of responses.
- Selected questions may be used as tiebreakers.

<b><i>Common Cancers</i></b>  Skin Cancers: Basal cell, squamous cell, melanoma  Breast Cancer  Lung Cancer	<b><i>Cancer Mechanisms</i></b>  Cell cycle controls  Metastasis  Links to Viruses	<b><i>Cancer Diagnosis</i></b>  Laboratory Test Results  Biopsy  Imaging Results
<b><i>Cancer Genetics</i></b>  Oncogenes  Tumor-suppressor genes  Types of Genetic Mutations  Biomarkers	<b><i>Cancer Treatments</i></b>  Radiation Therapy  Chemotherapy  Surgery  Immunotherapy	<b><i>Cancer Epidemiology</i></b>  Incidence Statistics  Risk Factors  Prevention