Biology 12 Assignment – Presentations begin in class on Tuesday

1st – Define Cancer

2nd – This research project focuses on what happens when cells do not function correctly. Many people are affected by cancer; you may even have some family members or friends that have or have had cancer. I suggest that you choose a cancer that affects someone you know or intrigues you because it is interesting. The goal is to research the cancer and orally present information and recent research through PowerPoint, Prezi, etc. Be creative and use colour, good visuals, videos, class activity, etc. **Due Date: Tuesday, November 14th.** We will be presenting in class. This project will be done in pairs. Please read section 10-3. You do not need to use just the links below, feel free to use whatever you wish. Become experts! You will be given a half class tomorrow and full class on Friday to work on this. Some students will need to finish this at home over the long weekend.

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| Cancer | Description | Websites |
| Bladder Cancer | Bladder cancer is cancer of the sac that collects and holds urine until it exits your body. | <http://www.cancer.gov>  <http://www.nlm.nih.gov/medlineplus>  <http://www.mayoclinic.com>  <http://www.cancer.org>  <http://jama.ama-assn.org>  <http://kidney.niddk.nih.gov>  <http://www.afud.org> |
| Brain | Adult [brain tumors](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=387264&version=Patient&language=English) are diseases in which [cancer](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=45333&version=Patient&language=English) ([malignant](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=45772&version=Patient&language=English)) [cells](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=46476&version=Patient&language=English) begin to grow in the [tissues](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=46683&version=Patient&language=English) of the brain. | <http://www.abta.org>  <http://www.tbts.org>  <http://www.braintumor.org>  <http://www.cancer.gov>  <http://www.nlm.nih.gov/medlineplus>  <http://www.mayoclinic.com>  <http://www.cancer.org> |
| Breast Cancer | Breast cancer is a disease in which malignant (cancer) cells form in the tissues of the breast. | <http://www.avoncompany.com/women/avoncrusade>  <http://www.cbhp.org>  <http://www.hopkinsbreastcenter.org>  <http://www.komen.org>  <http://www.y-me.org>  <http://www.halls.md/breast/risk>  <http://www.cancer.gov>  <http://www.nlm.nih.gov/medlineplus>  <http://www.mayoclinic.com>  <http://www.cancer.org> |
| Colon and Rectal Cancer | Colon cancer is a disease in which malignant (cancer) cells form in the tissues of the colon, the large intestine.  Rectal cancer is a disease in which malignant (cancer) cells form in the tissues of the rectum, the last part of the body’s digestive system. | <http://www.cancer.gov>  <http://www.nlm.nih.gov/medlineplus>  <http://www.mayoclinic.com>  <http://www.cancer.org>  <http://digestive.niddk.nih.gov>  <http://www.asco.org> |
| Endometrial Cancer | Endometrial cancer is a disease in which malignant (cancer) cells form in the tissues of the endometrium. The [endometrium](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=46108&version=Patient&language=English) is the lining of the [uterus](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=46645&version=Patient&language=English), where a [fetus](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=46400&version=Patient&language=English) grows. | <http://www.nlm.nih.gov/medlineplus>  <http://www.cancer.gov>  <http://www.mayoclinic.com>  <http://www.cancer.org>  <http://www.yourdiseaserisk.harvard.edu/hccpquiz.pl?lang=english&func=home&quiz=uterine>  <http://www.4woman.gov> |
| Kidney Cancer (Renal Cell) | [Renal cell cancer](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=44988&version=Patient&language=English) (also called [kidney](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=46325&version=Patient&language=English) [cancer](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=45333&version=Patient&language=English) or renal [adenocarcinoma](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=46216&version=Patient&language=English)) is a disease in which [malignant](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=45772&version=Patient&language=English) (cancer) [cells](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=46476&version=Patient&language=English) are found in the lining of tubules (very small tubes) in the kidney. | <http://www.nlm.nih.gov/medlineplus>  <http://www.cancer.gov>  <http://www.mayoclinic.com>  <http://www.cancer.org>  <http://jama.ama-assn.org>  <http://www.afud.org/education/kidney/kidneycancer>  <http://kidney.niddk.nih.gov> |
| Leukemia | Leukemia is cancer that begins in blood cells and can affect adults as well as children. | <http://www.nlm.nih.gov/medlineplus>  <http://www.cancer.gov>  <http://kidshealth.org/parent/medical/cancer/cancer_leukemia>  <http://www.mayoclinic.com>  <http://www.cancer.org>  <http://www.leukemia-lymphoma.org> |
| Lung Cancer | Cancers that begin in the lungs are divided into two major types, [non-small cell lung cancer](http://www.cancer.gov/dictionary/db_alpha.aspx?expand=n#non-small cell lung cancer) and [small cell lung cancer](http://www.cancer.gov/dictionary/db_alpha.aspx?expand=s#small cell lung cancer), depending on how the cells look under a microscope. Each type of lung cancer grows and spreads in different ways and is treated differently. | <http://www.nlm.nih.gov/medlineplus>  <http://www.cancer.gov>  <http://www.mayoclinic.com>  <http://www.cancer.org>  <http://www.lungusa.org>  <http://www.lungcancer.org>  <http://www.ncbi.nlm.nih.gov>  <http://www.yourdiseaserisk.harvard.edu/hccpquiz.pl?lang=english&func=home&quiz=lung> |
| Melanoma | Melanoma is a disease in which malignant (cancer) cells form in the skin cells called melanocytes (cells that color the skin). | <http://www.nlm.nih.gov/medlineplus>  <http://www.cancer.gov>  <http://www.mayoclinic.com>  <http://www.cancer.org>  <http://familydoctor.org/666.xml>  <http://www.skincarephysicians.com/skincancernet>  <http://www.yourdiseaserisk.harvard.edu/hccpquiz.pl?lang=english&func=home&quiz=melanoma>  <http://www.skincancer.org> |
| Non-Hodgkin’s Lymphoma | Adult non-Hodgkin’s lymphoma is a disease in which malignant (cancer) cells form in the lymph system. The [lymph system](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=45764&version=Patient&language=English) is part of the [immune system](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=46356&version=Patient&language=English) and can spread to the [liver](http://www.cancer.gov/Common/PopUps/popDefinition.aspx?id=46312&version=Patient&language=English) and many other organs and tissues. | <http://www.nlm.nih.gov/medlineplus>  <http://www.cancer.gov>  <http://www.mayoclinic.com>  <http://www.cancer.org>  <http://www.marrow.org>  <http://www.lymphoma.org>  <http://www.leukemia-lymphoma.org> |
| Pancreatic Cancer | Pancreatic cancer is one of the most serious of all cancers. It develops when malignant cells form in the tissues of your pancreas — a large organ that lies horizontally behind the lower part of your stomach. | <http://www.nlm.nih.gov/medlineplus>  <http://www.cancer.gov>  <http://www.mayoclinic.com>  <http://www.pancreasfoundation.org>  <http://www.cancer.org>  <http://www.pancreatica.org>  <http://pathology2.jhu.edu/pancreas/hered.cfm>  <http://www.yourdiseaserisk.harvard.edu/hccpquiz.pl?func=d_start&cancer_list=Pancreatic> |
| Prostrate Cancer | Prostate cancer is cancer of the prostate gland. The prostate's primary function is to produce seminal fluid, the fluid that nourishes and transports sperm. | <http://www.nlm.nih.gov/medlineplus>  <http://www.cancer.gov>  <http://www.mayoclinic.com>  <http://www.cancer.org>  <http://www.prostatecancerfoundation.org>  <http://www.afud.org>  <http://www.genome.gov>  <http://www.cdc.gov/cancer/prostate> |
| Skin Cancer (Non-Melanoma) | Basal cell and squamous cell are the two most common and comprise the large majority of cases of nonmelanoma skin cancer. Both are superficial, slow growing and highly treatable, especially if found early. | <http://www.nlm.nih.gov/medlineplus>  <http://www.cancer.gov>  <http://www.mayoclinic.com>  <http://www.cancer.org>  <http://www.skincancer.org>  <http://www.asds-net.org>  <http://www.aad.org> |
| Thyroid Cancer | Thyroid cancer is cancer of the thyroid gland, the gland that produces hormones that regulate every aspect of your metabolism. | <http://www.nlm.nih.gov/medlineplus>  <http://www.cancer.gov>  <http://www.mayoclinic.com>  <http://www.cancer.org>  <http://www.thyroid.org>  <http://ghr.nlm.nih.gov/condition=multipleendocrineneoplasiatype2> |

3rd - Research a method for the treatment of cancer that is currently being developed. Examples you may choose from include monoclonal antibodies, immunotherapy using tumor infiltrating lymphocytes, hyperthermia – using heat, cryotherapy - cold, photodynamic therapy - light, or you may choose an alternative treatment as appropriate. Discuss the pros and cons of each method of treatment.

4th - Select an aspect of biotechnology related to cell division that is of interest to you (e.g. regeneration of lost limbs) or a type of cancer for which you will study causes, treatments and statistics. Be sure to investigate your topic using more than one source of electronic or print information. You will be required to present your topic to the class. See below a list of possible cancers.

Group Names: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Cancer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Cancer Presentation Grading Rubric**

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| --- | --- | --- | --- |
| Presentation Requirements | Earned Points | Possible Points | Comments |
| Introduction   * Name the cancer * Introduce team members |  | 5 |  |
| Definition of the cancer   * What happens to the cells? * What part of the body does it generally affect? |  | 5 |  |
| Description of the symptoms   * List all of the possible effects on the body |  | 5 |  |
| Possible causes of the cancer   * Are there environmental or health factors that can cause the cancer? * Can the cancer be inherited? |  | 5 |  |
| Prevention   * What can be done to prevent getting this cancer? |  | 5 |  |
| How the cancer is treated   * Medications? Surgery? * Chemotherapy? Radiation? * Nutrition? Lifestyle choices? |  | 5 |  |
| How the cancer is diagnosed   * What tests are done? * Are scans done with MRI, CAT scan, PET scan, X-ray, or ultrasound machines? |  | 5 |  |
| How many and what type of people are likely to have the disorder   * Is it more common in a certain group of people? * How common is it? |  | 5 |  |
| Application of research article   * What new information did you learn from your research? |  | 10 |  |
|  |  |  |  |
| **Total Points Earned** |  | **50** |  |