

CMSC423: Gene Scavenger Hunt  
Spring 2017

Angelina Jolie underwent a mastectomy upon learning she carried mutations associated with breast cancer susceptibility. For this exercise, you will learn about the molecular basis of that decision.

Find (and indicate source with a URL):

1. Gene: name, symbol, entrez gene id, ensembl gene id
2. Location in human genome (as reported by entrez): chr, start, stop
3. Screenshot of Ensembl genome browser for gene region
4. Gene structure: how many exons? how many mRNA transcripts according to refseq?
5. dbSNP or ExpASy record for a mutation in this gene associated with breast cancer: what kind of variation is it (point mutation/nucleotide change, insertion, deletion)?
6. OMIM record for this gene
7. RefSeq record for protein sequence of one of the gene's isoforms
8. UniProtKB record for gene
9. Pubmed record for 1 paper on association of the gene you found and breast cancer
10. Record for one GEO (gene expression omnibus) experiment (GSE id) containing expression for a breast cancer sample.

How to submit:

- Write answers to these 10 questions in a document (e.g., Word, Pages, Google Docs)
- Make sure you cite your source for each question (a URL is fine)
- Write names and UIDs of your group
- You may insert screenshots in your document as needed
- Save as PDF and submit to ELMS:
  - <https://myelms.umd.edu/courses/1218381/modules/items/8829704>