{% extends "layout.html" %} {% block title %}PiTP{% endblock %} {% block header2 %}

PiTP Lectures

{% endblock %} {% block content %}

(1) Identifying driver genes in cross-sectional cancer studies

Papers

- **Mutational heterogeneity in cancer and the search for new cancer-associated genes**
  Michael S. Lawrence, Petar Stojanov et al.
  Nature. 2013 Jul 11; 499(7457): 214â€“218.
- **The integrated landscape of driver genomic alterations in glioblastoma**
  Frattini V. et al.
  Nature Genetics 2013 Aug 05. doi:10.1038/ng.2734.

Datasets

- TCGA_Somatic_Mutations

(2) Reconstructing the evolutionary history of tumors in longitudinal cancer genomic studies

Papers

- **Clonal evolution mechanisms in NT5C2 mutant-relapsed acute lymphoblastic leukaemia**
  Gannie Tzoneva et al.
  Nature. Volume 553 (25 January 2018) doi:10.1038/nature25186.
- **Immune and genomic correlates of response to anti-PD-1 immunotherapy in glioblastoma**
  Junfei Zhao et al.
  Nat Med. 2019 Feb 11. doi: 10.1038/s41591-019-0349-y.
- **Clonal evolution of glioblastoma under therapy**
  Jiguang Wang et al.
  Nature Genetics volume 48, pages 768â€“776 (2016).

Datasets

- Glioblastoma variants

(3) Archeology of human cancers: mutational signatures

Papers

- **Signatures of mutational processes in human cancer**
  Ludmil B Alexandrov et al.
  Nature volume 500, pages 415â€“421 (22 August 2013).
- **The Repertoire of Mutational Signatures in Human Cancer**
  Ludmil B Alexandrov et al.
  doi: https://doi.org/10.1101/322859.
- **Characterizing Mutational Signatures in Human Cancer Cell Lines Reveals Episodic APOBEC Mutagenesis**
  Petljak M et al.
  Cell, 2019; 176 (6): 1282.
- **Landscape of somatic mutations in 560 breast cancer whole-genome sequences**
  Serena Nik-Zainal et al.
  Nature. 2016 May 2; 534(7605): 47â€“54.
- **Passenger hotspot mutations in cancer driven by APOBEC3A and mesoscale genomic features**
  RÃ©mi Buisson et al.
  Science 28 Jun 2019: Vol. 364, Issue 6447, eaaw2872 doi: 10.1126/science.aaw2872.

Datasets

- Mutations from 560 WGS breast cancer samples

(4) Studying cancer and stromal heterogeneity using single cell data

Papers

- **Single-cell topological RNA-seq analysis reveals insights into cellular differentiation and development**
  Abbas H Rizvi et al.
  Nat Biotechnol. 2017 Jun; 35(6): 551â€“560.
- **Quasi-universality in single-cell sequencing data**
  Luis Aparicio et al.
  arXiv preprint arXiv:1810.03602 (2018).

Tools

- **Randomly** (background | manual | Github)

Datasets

{% endblock %}