

Module 5: Overview

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Module Overview

In this module, we will be learning about how tumors in the body are composed of many different cell types, even though cell lines derived from those tumors are clonal. We will be learning about the cell types that are present in tumors with special emphasis on immune cells. We will be reading a paper that shows how loss of the Y chromosome can cause increased tumor growth by affecting the immune response to tumor cells. In this module, we will also be looking at results for sex chromosome genes studied by your classmates and start organizing our conclusions so that we can write about them in a manuscript (focus of Module 6).

Module Learning Objectives

5.1 Biology/Stats (1.5 hour)

1. Understand factors that contribute to within tumor heterogeneity
2. Determine results that will be showcased in final manuscript
3. Write figure legends and results describing key figures

5.2 Coding (2 hours)

1. Determine which genes alone and/or in combination can be used to predict sex in CCLE cell lines
2. Create a file with a table associating CCLE cell line to predicted sex based on gene expression

5.3 Research/Professional development (30 min)

1. Organize research results to write a manuscript
2. Learn how to choose an appropriate scientific journal to feature results of a study