In her thesis, Chloé Beate Steen explores computational approaches to study the complexity in cancer.

Four papers are presented, each characterizing different levels of heterogeneity in cancer tumors, with a special focus on lymphomas, a cancer type that originates from cells of the immune system.

In Paper I and Paper II, two computational tools to facilitate analysis of tumor heterogeneity are presented. Clustermap (Paper I) offers a user-friendly tool for clinicians and biologist to perform clustering on complex genomics datasets and assess the quality of the results. CIBERSORTx (Paper II) allows users to dissect the cellular composition of a tumor from bulk gene expression profiles.


Taken together, the papers making up this thesis provide novel insights into tumor heterogeneity, as well as new bioinformatics tools for discovery of biomarkers, which may help pave the way for personalized medicine.