



The Integrated Biology domain at *Institut Curie* regroups 17 teams from the following units: U830 INSERM, U900 INSERM, and U932 INSERM. Altogether these teams aim at understanding the fundamentals of etiology, genesis, and progression of cancer and converting this knowledge into improved treatments by developing translational research and clinical trials.

To achieve this goal the groups in this domain consider cancer as a complex ecosystem where many different cell components interact and govern the evolution of the pathology in the specific genetic context of the patient: the tumor cells themselves (including their heterogeneity), the tumor micro-environment and the immune system -. We investigate the functional aspects governing oncogenesis including germline genetic variation, cell differentiation, immune response, genetic instability, oxydative stress, intracellular traffic...

The involvement in the clinics concerns development of biomarkers, and participation into early clinical trials in particular for immunotherapy and targeted inhibitors.

This domain has expertise in different molecular and cellular biology tools, dealing with tumor samples, cell lines,- animal models,- computational models integrating high-throughput data (NGS, microarrays, proteomics, bioimaging) and network modeling.