

WP11: Cancer phenotyping

Due to the variety of tissues and cancer types involved, Cancer Phenotyping is a complex process that requires a multidisciplinary approach involving imaging, pathology, molecular biology and cytogenetics. Moreover, some of the genetically-engineered mice developed as models of human cancer present unique lesions require a careful comparative evaluation with the human disease, as compared to spontaneous or induced tumors in mice. For primary screening we established protocols for tumor description, collection, storage and fixation that should allow both specialized histopathological and molecular phenotyping (e.g. GCH and expression array analysis of tumors). We also established a validated list of primary antibodies for the characterization of mouse tumors by immuno-histochemistry of formalin-fixed tissue. A consortium of mouse and human pathologists within Europe has been formed and has begun to undertake the analysis of specific tumor models in order to reach consensus on unequivocal pathological terms and the corresponding clinical condition as well as to search for genotype-phenotype correlations. A database with virtual slide images of these models is being developed and will be made accessible via the web.