



What is the most different cancer subtype between pet and human tumors ?

The main difference does not only come from the cancer type itself but from its form and frequency of occurrence within the species. Some subtypes are commonly observed in dogs and cats, but are rarely seen in humans. Thus, these animal models can still be of interest in order to investigate novel therapeutics for some of these rare diseases in humans when current options are very limited or inefficient. Cutaneous mast cell tumors are the most frequent histotype of skin cancer in dogs. Oral malignant melanoma is also a frequent tumor of the oral cavity in dogs. Canine prostatic carcinoma is typically an aggressive disease in dogs associated with poor responses to local treatment such as radiotherapy and a high metastatic rate.

Tobacco smoke or alcohol induced cancers are relatively rare in pet animals, yet passive smoking plays a role in the induction of oral and lung cancers in feline and canine companions.

Also, in veterinary medicine, cancers tend to be diagnosed at a later stage (advanced T stage, recurrent or metastatic diseases) than in human medicine. This comes from the fact that veterinary oncology is a rather new discipline and that veterinarians do not suspect neoplastic differentials early enough or that they are not always keen to refer promptly cases for more expert opinions. A second reason might very well be that cancers in pet animals also tend to develop at a quicker rate than what is observed in humans.