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In vivo screening models of anticancer drugs

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Abstract

Animal models have been indispensable when conducting research to further the understanding of cancer biology and when developing anticancer drugs. This article presents an overview of the most commonly utilized animal models for preclinical screening of anticancer agents. These models can be roughly divided into two groups: models in which tumors are transplanted into mice, and models in which tumors develop in situ, either spontaneously or induced. Special attention is paid to the widely used subcutaneous xenotransplant and the orthotopic tumor models. We will also highlight the development and use of genetically modified mice.

Keywords

Animal models, Anticancer drugs, Cancer, Oncology, Test-systems, Toxicity, Tumor