

Custom Service for Patient-Derived Xenograft Tumor Models

In vitro cell killing assays using commercially available patient-derived cell lines or *in vivo* tumor growth inhibition assays using cell-line-derived xenograft models are commonly employed to determine the efficacy of anti-cancer drugs. Unfortunately, only 5% of the anti-cancer drugs that have anti-cancer activity in preclinical studies are approved for clinical application by the United States Food and Drug Administration (FDA). Therefore, a model to guide individualized medicine is required.

Patient-derived xenograft (PDX) models of multitude of tumors have emerged as a powerful tool for predicting drug efficacy and for understanding tumor characteristics. PDX models are established by the direct transfer of human tumors into immunodeficient mice and then maintained by passaging from mouse to mouse. The ability of PDX models to maintain the original features of patient tumors and to reflect drug sensitivity has greatly improved both basic and clinical study outcomes. A significant association was observed between drug responses in patients and the corresponding PDX models in greater than 85% of therapeutic outcomes. Thus, PDX models are recognized as accurate and clinically relevant models.

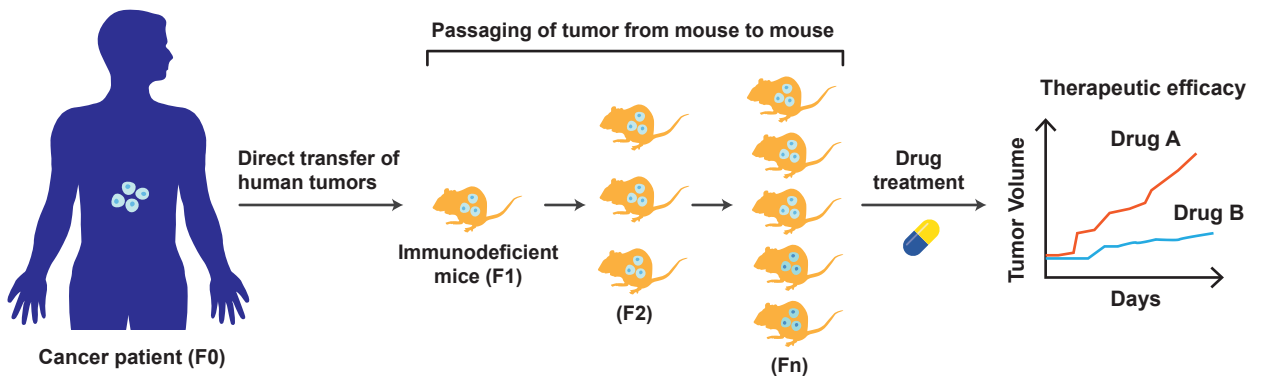
With superior skills, Abnova has successfully established bladder PDX model for researchers to evaluate *in vivo* therapeutic efficacy of new compounds for cancer, and more PDX models from different type of tumors are in development. We also offer customized drug injection service for the convenience of our customers.

Advantages

- Increased clinical relevance compared to cell line-derived xenografts
- Maintaining original features of patient tumors to reflect drug sensitivity
- Significant association between drug responses in patients and the corresponding PDX models

Our Services

- Subcutaneous implantation of tumor fragment with flawless surgical techniques
- Available bladder PDX model and other models upon request
- Evaluation of tumor growth in subcutaneous xenograft model
- Drug treatment with customized injection: s.c, i.p, or i.v.

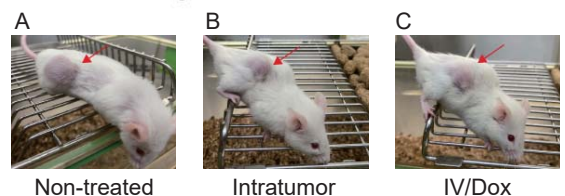
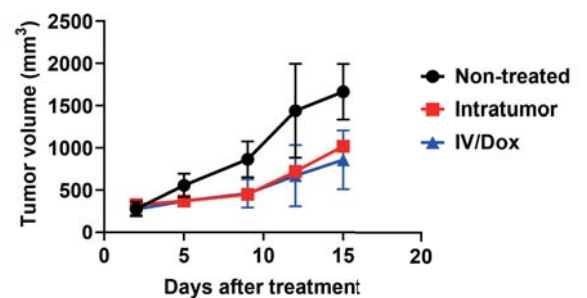


Example

The bladder cancer PDX model was separated into three treatment groups and observed on day 12 after treatment.

- Group A of PDX model did not receive any treatment (Non-treated).
- Group B of PDX model received intratumor T cells expressing attIL-12 injection (Intratumor).
- Group C of PDX model received intravenous T cell expressing attIL-12 plus doxorubicin injection (IV/DOX).

The growth curve has indicated that the tumor growth is suppressed for attIL-12-T cell and IV/DOX treatment groups. The results have also shown that the tumor size of IV/DOX group is significantly smaller than the other groups on day 15 after treatment.



PDX Models

Bladder cancer

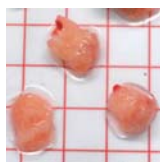


Tumor fragments



Process into 3*3*3 mm³

Colorectal cancer



Tumor fragments



Process into 3*3*3 mm³

Hepatocellular carcinoma



Tumor fragments



Process into 3*3*3 mm³