

CAPABILITIES

Cancer Therapeutics Development

Certis Oncology Intelligence® brings together AI-driven predictive modeling, thoughtful translational study design, advanced imaging, and rigorous pharmacological science to help you move promising therapeutics toward the clinic with confidence.

In Vivo Pharmacology

Certis offers extensive experience evaluating small molecule and biologic monotherapy, combination, and immuno-oncology regimens using patient-derived xenograft (PDX) and cell line-derived xenograft (CDX) models.

Surgical implantation expertise: orthotopic, intracranial/stereotactic, renal capsule, intramuscular, intraosseous, intraperitoneal, intravascular, and subcutaneous approaches

Flexible study designs tailored to your questions:

- Patient-matched co-clinical trials
- Blood-brain barrier penetration studies
- Tolerability assessment in tumor-bearing and naïve cohorts
- Customizable dosing schedules, longitudinal imaging, serial blood collection, and pharmacokinetic profiling
- PK/PD studies

STANDARD EFFICACY ENDPOINTS

- Tumor growth inhibition (TGI), regression kinetics, and complete response rates
- Dose-response characterization and schedule optimization
- Combination studies with synergy/additivity analysis
- Resistance, relapse, and neoadjuvant/adjuvant modeling
- Survival, time-to-progression, and objective response rates (CR/PR/SD)

In Vitro/Ex Vivo Analyses

Our team provides comprehensive laboratory services spanning immunohistochemistry, immuno-oncology assays, and functional cellular analyses. We work collaboratively with you on experimental design, optimization, and quality control to ensure reliable, actionable data.

Core capabilities:

- Comprehensive, in-house histology services: FFPE processing, H&E staining, multiplexed IHC with board-certified pathology review
- Advanced cellular analysis using spectral flow cytometry, IncuCyte® Live-Cell Imaging, cfDNA analysis, qPCR, ELISA, MSD platforms, and more
- Custom assay development and validation
- Proprietary PDX-derived 3D spheroid cultures
- Seamless integration of client-provided cell lines

Advanced Imaging

Certis leverages advanced imaging technologies to evaluate disease progression and drug response, enabling researchers to monitor tumor growth and interrogate fundamental biological questions from multiple perspectives.

- Non-invasive visualization, characterization, and quantification in any tumor site
- Two murine-scale MRIs
- Multi-modal optical imaging including bioluminescence, fluorescence, and 3D tomography

Custom Preclinical Model Development

Advances in targeted cancer therapies have made drug discovery a highly customized endeavor, and modern cancer models are no longer “one-size-fits-all.” Predictive power now comes from layered, purpose-built customization across tumor, host, immune system, and study design. We specialize in purpose-built systems that capture the molecular and microenvironmental complexity your research requires:

- Humanized immune reconstitution (CD34+ HSC, PBMC), including patient-matched configurations
- Treatment-resistant, relapse/rechallenge models
- Focal and whole-body irradiation to mimic clinical scenarios that include radiotherapy
- Spontaneous and experimental metastasis models
- ADC target-positive/negative matching
- Custom-cultured companion PDX-derived 3D spheroids for seamless translation from *in vitro* to *in vivo* studies

CertisAI Predictive Oncology Intelligence™

Our patented*, validated AI/ML platform identifies gene expression signatures that correlate with therapeutic response, helping you make better strategic decisions earlier in development.

What CertisAI can do for your program:

- Discover predictive gene expression signatures for response and resistance
- Select the most appropriate models for your validation studies
- Prioritize cancer types most likely to benefit from your therapeutic
- Predict synergistic potential in combination strategies
- Generate mechanistic insights into drug activity
- Rank candidates in compound libraries
- Inform clinical trial design and patient selection strategies

By leveraging CertisAI's computational power, you can replace many empirical screening studies with data-driven *in silico* insights, accelerating your path from discovery to the clinic.

Explore the BarneyOI Cancer Model Database® featuring 700+ well-characterized, low-passage tumor models from North American patients, or talk to us about developing a custom model for your specific needs.



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CANCER MODEL DATABASE

certisoncology.com/tumor-bank