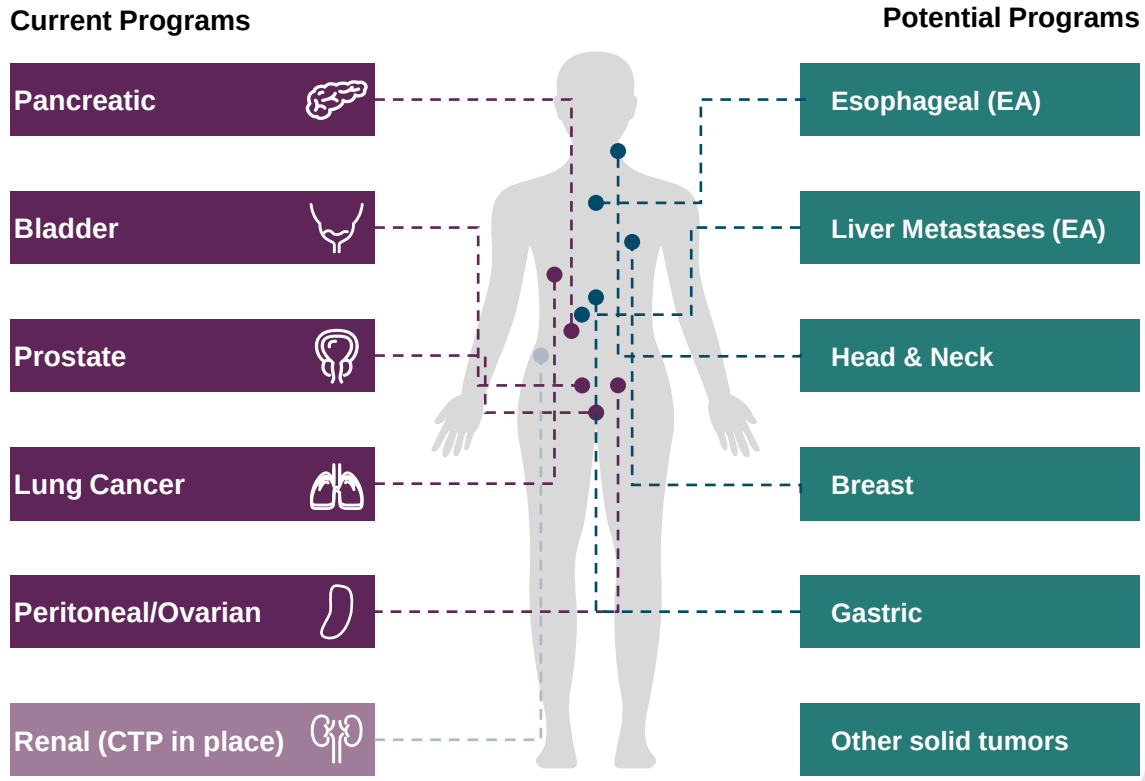

NanOlogy

Clinical Stage Oncology Company

- Patented large surface area microparticle (LSAM) oncology drug platform
- 4 drugs in clinical development
- 9 clinical trials in 5 solid tumors
- More than 140 patients treated with promising efficacy data
- Clinical evidence of immunogenic effect
- No confirmed drug-related SAEs
- Tumor-directed therapy with multiple routes of local administration

Advancing Tumor-Directed Drug Therapy



Key Highlights

Large Surface Area Microparticle Platform (LSAM)

- Composition of matter patent
- High, sustained dose at the disease site
- No systemic toxicity due to gradual drug clearance
- Optimized for tumor-directed drug therapy to address unmet oncology needs
- Unique supercritical precipitation (SCP) technology
- Clinical and commercial GMP production

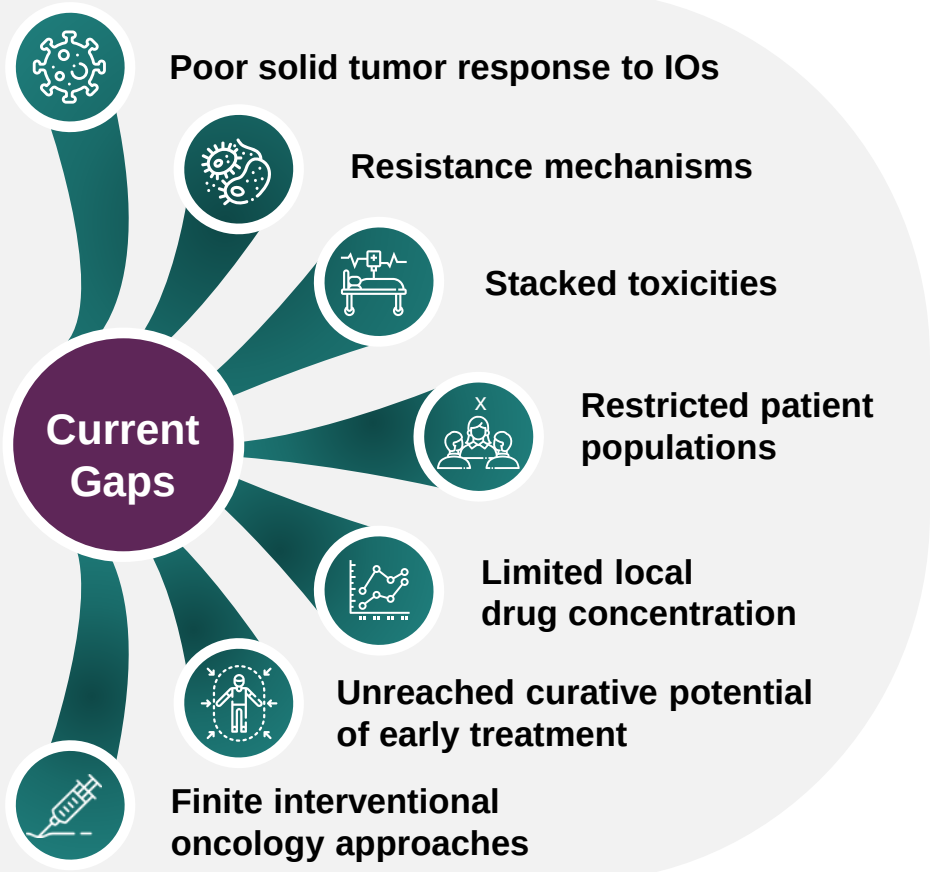
Clinical Evidence in Multiple Solid Tumors

- Promising tumor response and neoadjuvant potential in LAPC
- Complete response at 3 months > 70% in hrNMIBC
- Activity demonstrated in all 5 solid tumors under clinical development
- No confirmed drug-related SAEs
- Immunogenic effect seen in LAPC and bladder cancer with analysis underway in prostate and lung cancers

Large Market Opportunity

- Therapeutic potential across the disease spectrum
- Additive to current SOC without adding to toxicity
- Immunogenicity without toxicity
- IO combination therapy potential
- Organ sparing potential
- Expansion opportunities in other solid tumors and drug classes
- Accessible US patient population > 500K

Advancements in Tumor-Directed Drug Therapies are Aimed at Addressing These Gaps



Tumor-directed drug therapy is the delivery of drug into or near a tumor with the intent of concentrated drug uptake by the tumor and minimal systemic exposure to the drug

Potential impact on current gaps:

- **Higher, sustained dosing** at the tumor site
- **Drug combination strategy** without stacked toxicity
- Increase the response to immunoncology therapy by **inducing an immunogenic effect** within the tumor microenvironment (TME)
- **Minimize systemic exposure**
- Safer, effective disease intervention in **early stage**
- **Appropriate treatment modality** regardless of a tumor's molecular profile
- Offer **interventional oncologists/radiologists a high-value tool** to combine with advanced imaging and surgical techniques

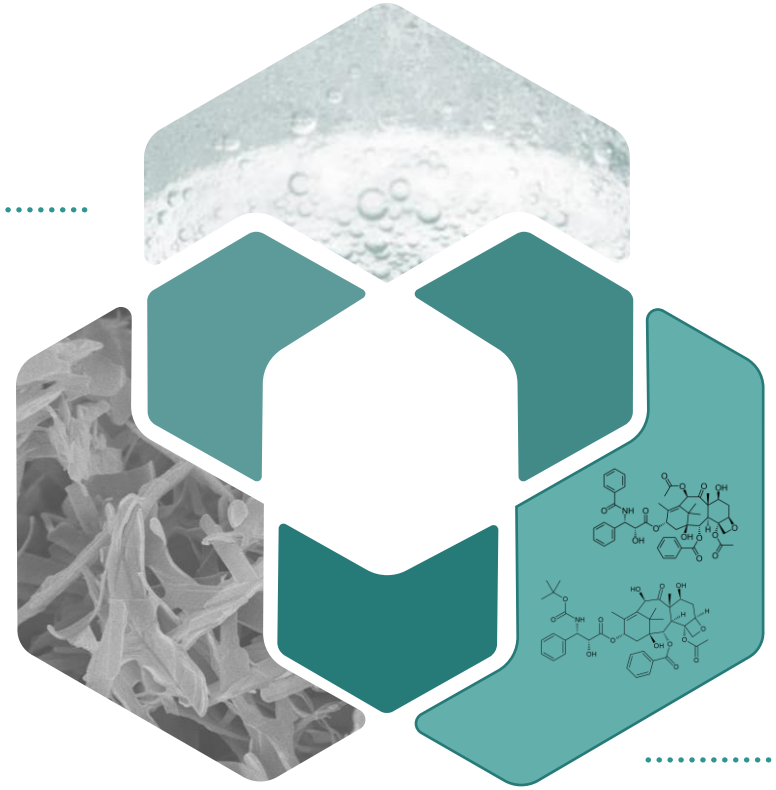
Requires a drug optimized for tumor-directed therapy

NanOlogy has Developed a Tumor-Directed Drug and Technology Platform that Offers Unique Advantages

The NanOlogy **proprietary supercritical precipitation (SCP) technology** creates concentrated, sustained-release, large-surface-area microparticles (LSAMs) of active drug for delivery at the disease site

- ***Pure drug particles*** with no excipients whatsoever
- Geometry allows for entrapment at the disease site
- Depot effect with continuous drug release > 4 weeks
- Gradual systemic clearance at subtoxic levels

Platform with application across multiple oncology drugs



The first investigational drugs are NanoPac® (LSAM paclitaxel) and NanoDoce® (LSAM docetaxel)

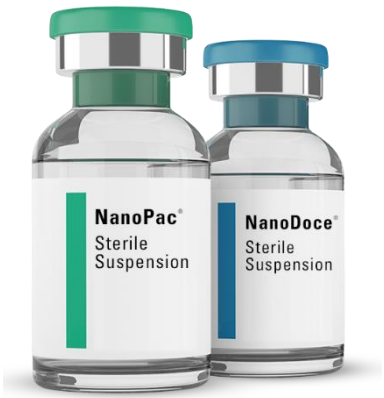
Capitalizing on the **advantages of taxanes**…

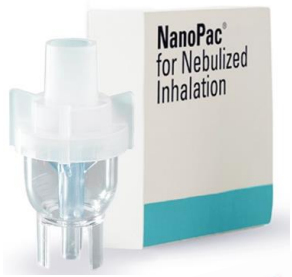
- Highly efficacious
- Broad spectrum, cell agnostic
- Immunogenic

Addressing the limitations of IV administration by offering….

- Superior toxicity profile
- No immune suppression to blunt immunogenic effects
- Better bioavailability to solid tumors
- Much longer residence in tumor at high, sustained concentration

Multiple Formulations and Routes of Administration to Optimize Tumor-Directed Therapy





Routes of Administration

- Intratumoral
- Peritumoral
- Intraperitoneal
- Resection bed
- Intravesicular
- Instillation
- Inhalation
- Intracystic
- Topical

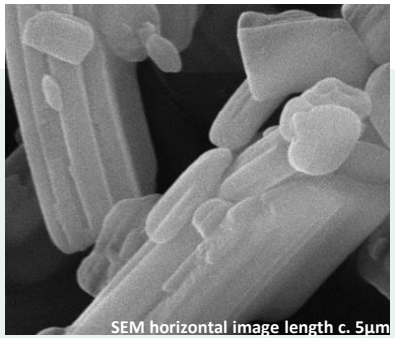
Advantages

- High sustained local concentration
- Continuous tumor cell death
- Immunogenic effect
- Negligible toxicity

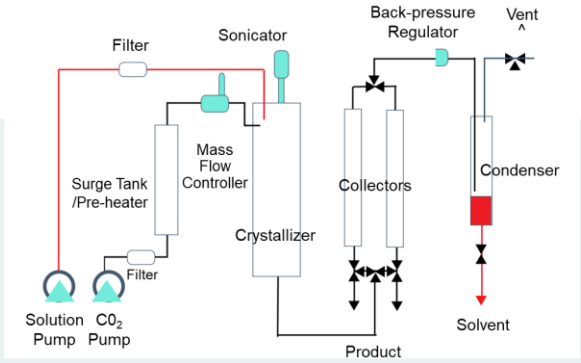
Enabled by a Proprietary SCP Technology Platform

Large Surface Area Microparticle (LSAM) Production

API Crystals

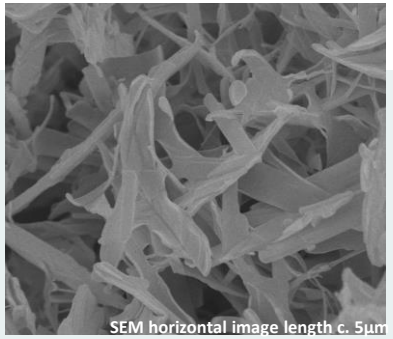


- ✓ Large and bulky crystals
- ✓ Large distribution around mean particle size
- ✓ Poor uniformity of suspensions
- ✓ Poor drug release due to small surface area
- ✓ Limited to dissolution in solvent as a solution for IV delivery



- ✓ API crystals dissolved in organic solvent and injected into precipitation chamber
- ✓ Sonicated into small uniform droplets via sonic probe
- ✓ Solvent stripped away from droplets via supercritical fluid carbon dioxide
- ✓ Stable microparticles of pure drug precipitated and collected on harvesting filters
- ✓ Platform for multiple drug classes

LSAMs



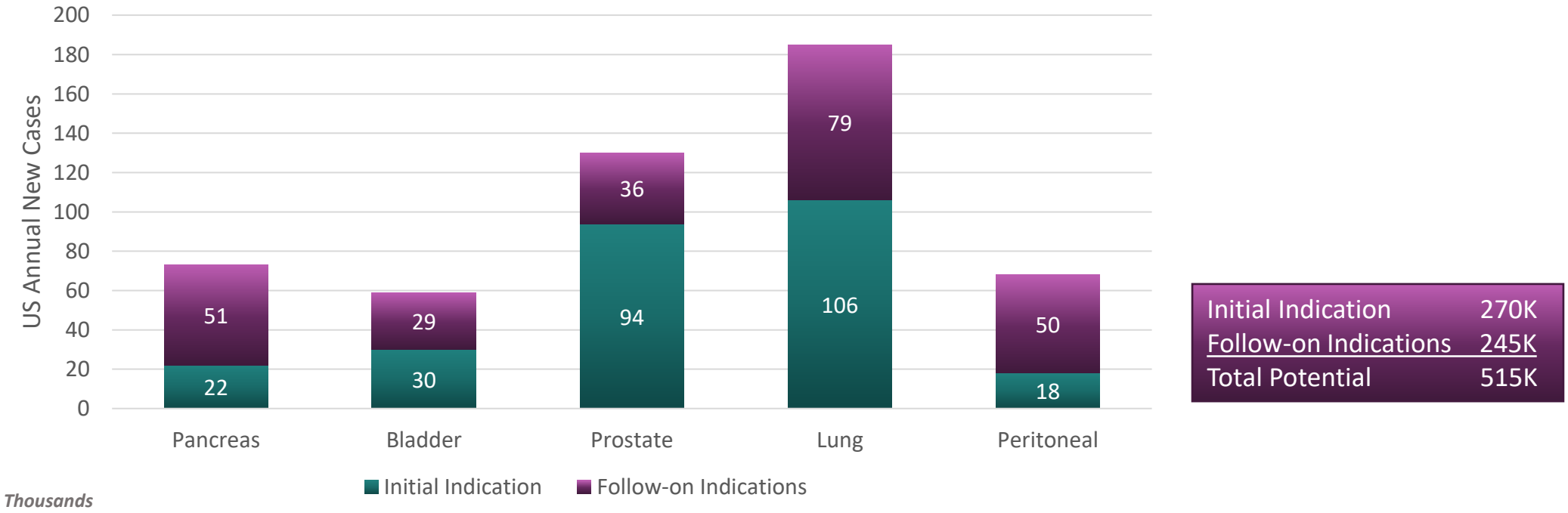
- ✓ Narrow mean particle size distribution
- ✓ Excellent suspension uniformity
- ✓ Microparticles suspended in saline-based fluid for local delivery
- ✓ Disproportionately large surface area to particle size ratio allows for:
  - ✓ Particle entrapment
  - ✓ Therapeutic drug release

Broad Development Program

Product	Indication	Delivery	IND	Phase 1	Phase 2	Phase 3
NanoPac® (LSAM Paclitaxel) for Sterile Suspension	Locally Advanced Pancreatic Adenocarcinoma	Intratumoral				
	Mucinous Cystic Pancreatic Neoplasms	Intracystic				
	Peritoneal Malignancies/Ovarian Cancer	Intraperitoneal				
	Prostate Cancer	Intratumoral				
	Lung Cancer	Intratumoral				
NanoDoce® (LSAM Docetaxel) for Sterile Suspension	High-Risk Non-Muscle Invasive Bladder Cancer	Resection Bed Injection & Intravesical Instillations				
	Muscle Invasive Bladder Cancer	Resection Bed Injection & Intravesical Instillations				
	Renal Cell Carcinoma	Intratumoral				
NanoPac® (LSAM Paclitaxel) for Inhalation	Lung Cancer	Nebulized Inhalation				

With Market Opportunity Across the Disease Spectrum

Accessible US Patient Population Includes Both Local and Metastatic Disease



Initial Indication	270K
Follow-on Indications	245K
Total Potential	515K

SEER 2020 or internal estimates

NanOlogy

Encouraging Clinical Data in Ongoing Programs . . .

	Indication		Subjects	Trial Phase	Dose	Dose Range	Clinical Data Summary
NanoPac®	Pancreatic Cancer (LAPC)		37/45	Phase 2a	1 intratumoral (IT) injection 2 monthly IT injections 4 monthly IT injections	20% tumor volume	• Two injection cohort at 6 months – 8/14 nonsurgical subjects in neoadjuvant subset restaged to surgical – 6/8 subjects underwent surgery: 5/6 R0; 1 x complete pathologic response; 2 x > 90% tumor burden reduction • 4 injection cohort 2/10 enrolled
	Pancreatic Cysts (IPMN/MCN)		19	Phase 2a	1 intracystic injection 2 intracystic injections (12 weeks apart)	Volume equal to volume of fluid aspirated from cyst	• Cyst volume reduction in 16/19 subjects at 6 months • Evidence of epithelial lining necrosis by DNA analysis or endomicroscopy in selected subjects • PK analysis of cyst fluid at 3 months > 250ng/mL (ULOQ) paclitaxel
	Peritoneal Malignancies		21	Phase 1	1 to 6 intraperitoneal instillations	50 – 275mg/m^2	• 6/21 (29%) subjects (salvage patients) survived > 1 year • Peritoneal fluid concentrations 450-2900 times greater than peak plasma drug concentrations/plasma concentration subtoxic at all timepoints
	Ovarian Cancer		10	Phase 2	1 intraperitoneal instillation	100 – 200mg/m^2	• PFS 60% ≥ 6 months; ORR 50% (CR 20%; PR 30%); OS 70% > 1 year
	Prostate Cancer		16	Phase 1/2	1 injection (28 days before prostatectomy)	20% lobe volume	• Mean tumor volume reduction 46% • Mean PSA-density decrease 35%
	Prostate Cancer		1/18	Phase 2	Up to 3 monthly injections (1st dose 90 days before prostatectomy)	10% tumor volume (up to 5 mL) 15mg/mL	• First subject enrolled Nov 2020
	Lung Cancer		0/18	Phase 2	Up to 3 monthly injections	20% tumor/node(s) volume	• First subject enrollment targeted for 1Q2021
NanoDoce®	Bladder Cancer	NMIBC	19	Phase 1/2	1x direct injection 10x weekly intravesicular instillations	Direct injection: up to 15mg Weekly instillation: up to 75mg	• Complete response at 3 months: 12/16 (75%)
		MIBC	16/18	Phase 1/2	1x direct injection 1x intravesicular instillation	Direct injection: up to 15mg 1x instillation: up to 75mg	• Day 45 bladder-intact event free survival: 8/12 (67%)

As of December 2020

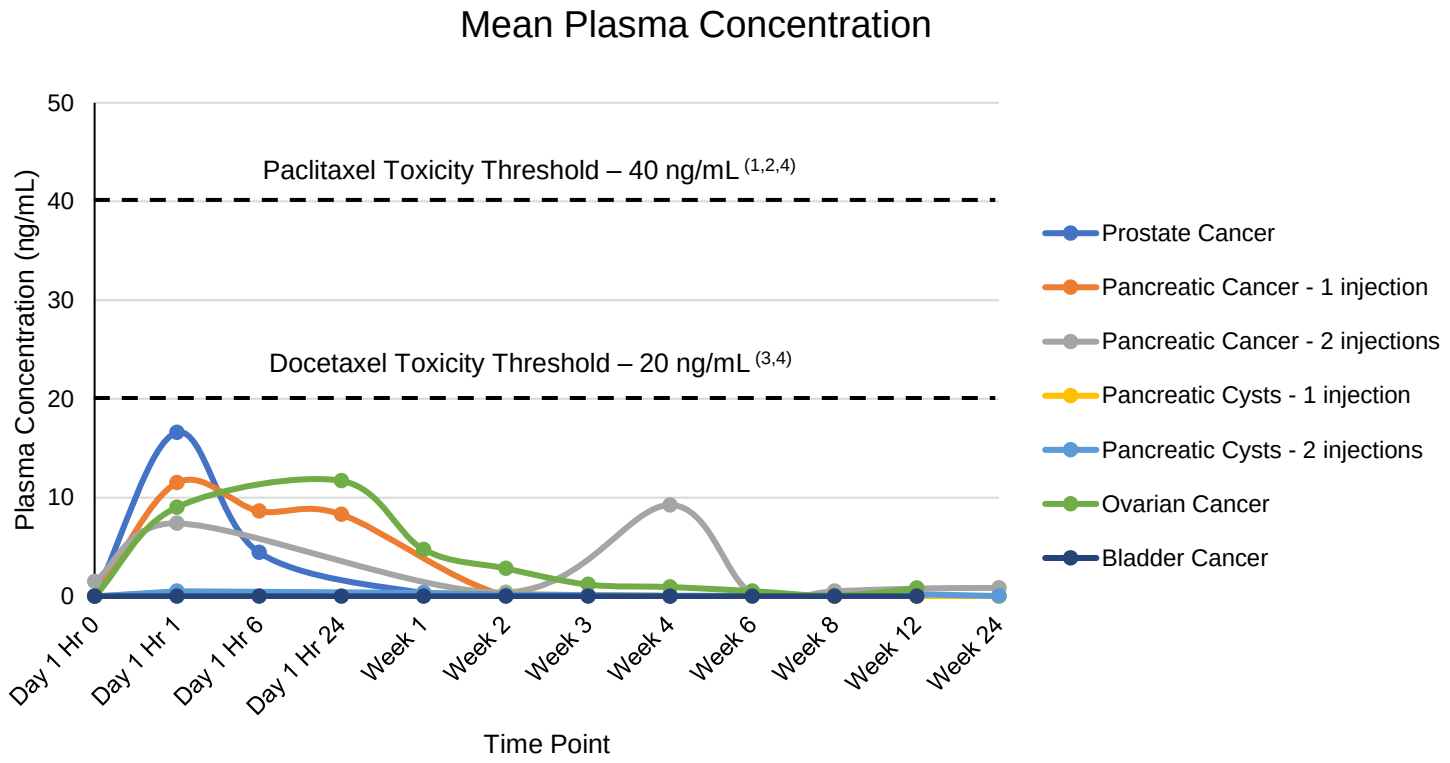
NanoPac® and NanoDoce® Have a Compelling Safety Profile

	Clinical Trial	Subjects	Events		Systemic SAEs			Local SAEs		
			TEAE	SAE	Definitely Related	Probably Related	Possibly Related	Definitely Related	Probably Related	Possibly Related
NanoPac	Pancreatic Cancer	37	201	31	0	0	0	0	0	3
	Pancreatic Cysts	19	100	5	0	0	0	0	1	0
	Peritoneal Malignancies	21	332	24	0	0	1	0	0	1
	Ovarian Cancer	10	208	13	0	0	0	0	0	7
	Prostate Cancer	16	76	0	0	0	0	0	0	0
NanoDoce	Bladder Cancer (NMIBC)	19	121	1	0	0	0	0	0	0
	Bladder Cancer (MIBC)	15/18 (1)	46	3	0	0	0	0	0	0

Note:
1. Enrolled as of December 2020

Plasma Levels from NanOlogy Clinical Trials

Subtoxic plasma drug concentrations at all timepoints demonstrated by clinical PK analysis



None of the systemic side effects associated with IV taxanes

- No alopecia
- No nausea
- No peripheral neuropathy
- No neutropenia
- No febrile neutropenia
- No thrombocytopenia

1. Clin Cancer Res 1999;5:767-774
2. S07-GM-01-2017
3. British Journal of Cancer (2007) 97, 290 – 296
4. LLOQ paclitaxel = 25 pg/mL; LLOQ docetaxel = 10 ng/mL

Immunogenic Effect

- Clinical Evidence:
  - Pancreatic Cancer treated with intratumoral NanoPac®
  - Bladder Cancer treated with intratumoral and intravesical (bladder wash) NanoDoce®
- Selected Preclinical Evidence:
  - Intratumoral NanoDoce in combination with systemic checkpoint inhibitor in metastatic breast cancer model
  - Metastatic breast cancer model treated with intratumoral NanoPac or intratumoral NanoDoce

Growing Global IP Portfolio

IP protection like a new chemical entity

Composition/Formulation

- 22 issued or allowed patents
- 26 pending applications
- Filed globally
- Taxane composition patents issued in US and AU and valid until 2036
- Protects product regulatory specifications including size, surface area, dissolution, density

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NanOlogy Therapeutic Platform

Uses/Indications

- 36 issued or allowed patents
- 91 pending applications
- Filed globally
- Protects broad uses: key cancer indications, solid tumors, neoplasia
- Protects routes of administration: IT, IP, inhalation, instillation, topical

127

Process

- 51 issued or allowed patents
- 21 pending applications
- Filed globally
- Protects equipment, assembly, nozzle, methods, precipitation, collection

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Includes

- Combinations with IO
- Kinase Inhibitors
- Orphan designation (ovarian)
- Reducing & Inhibiting Metastasis
- Cancer vaccines/ adoptive cell therapy

As of December 2020

NanOlogy

	DFB	CritiTech	US BIOTEST, INC.
Collaboration of Complementary Capabilities	Pharmaceutical investment and development company Strong track record in pharmaceutical startups, licensing, M&A, operations and partnerships • DPT Laboratories • HealthPoint Biotherapeutics • Coria • Phyton Biotech	CDMO specializing in particle engineering Developed the supercritical precipitation (SCP) technology and NanoPac® and NanoDoce® formulation	Pharmaceutical development and clinical research organization
NanOlogy Role	• Acquired the SCP technology in the field of oncology, related products, and intellectual property • Funding and general management • Regulatory and strategic oversight • Commercial manufacturing capability via Phyton Biotech • 10 employees	• Formulation development • Particle characterization and testing • CMC management • Clinical supplies production and management • 15 employees	• Preclinical and clinical management • Medical oversight • Regulatory submissions and management • 20 employees