



March 2020

## Forward Looking Statements

This presentation and the accompanying oral presentation by LIPAC Oncology, LLC (“LIPAC”) contains forward-looking statements. All statements contained herein other than statements of historical fact constitute forward-looking statements, including statements regarding LIPAC’s anticipated results of operations and financial position, business strategy and operating plans and LIPAC’s expectations for future operations.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, but not limited to: the timing and success of preclinical studies and clinical trials conducted by or on behalf of LIPAC, including with respect to the efficacy and safety of LIPAC’s product candidates; LIPAC’s ability to obtain and maintain regulatory approval of its product candidates, and the labeling for any approved products; the scope, progress, expansion and costs of developing and commercializing LIPAC’s product candidates; LIPAC’s ability to obtain and maintain intellectual property protection for its product candidates; LIPAC’s anticipated growth strategies; LIPAC’s expectations regarding competition; the anticipated trends and challenges in LIPAC’s business and the markets in which it operates; LIPAC’s ability to attract or retain key management and personnel; the size and growth of the potential markets for LIPAC’s product candidates and its ability to serve those markets; the rate and degree of market acceptance of LIPAC’s product candidates vis-à-vis alternative or existing therapies; LIPAC’s expectations regarding regulatory requirements; developments in applicable regulatory regimes; and the manner in which LIPAC intends to use its cash resources and the sufficiency thereof. Moreover, LIPAC operates in a very competitive and rapidly changing environment in which new risks emerge from time to time. It is not possible for LIPAC’s management to predict all risks, nor can LIPAC assess the impact of all factors on its business or the extent to which any such factor or combination of factors may cause actual results to differ materially from those contained herein. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed herein may not occur, and LIPAC’s actual results could differ materially and adversely from those anticipated or implied by the forward-looking statements contained herein. Except as required by law, LIPAC undertakes no obligation to update any such forward-looking statements after the date hereof to conform to actual results or changes in LIPAC’s expectations.

# LIPAC Oncology Leadership Team



**Dr. Ramachandran "TR" Thirucote, Ph.D.**  
*Chief Executive Officer*

- 30+ years of pharmaceutical experience
- Held positions at RoxRo, SRI, Agouron, and Thermedics



**Will Robbets**  
*President & Chief Financial Officer*

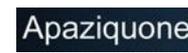
- 20+ years of experience in finance, M&A and operations in pharma and other industries
- Held VP/C-level leadership positions at Thomson Reuters, KPMG, TesoRx Pharma, LiveNote, and SoftLine



**Dr. Michael Oefelein, M.D., FACS**  
*Chief Medical Officer*

- 15+ years of experience in the pharmaceutical and medical device industries
- Held leadership positions at Allergan and Digirad

## Past Commercial Success



## Scientific Advisors



**Dr. Shigeo Horie, M.D., Ph.D.**  
*Scientific Advisor*

- Chairman of the Department of Urology at Juntendo University in Tokyo
- Expert of Oncology, Men's Health, Anti-Aging Medicine, and Genetics



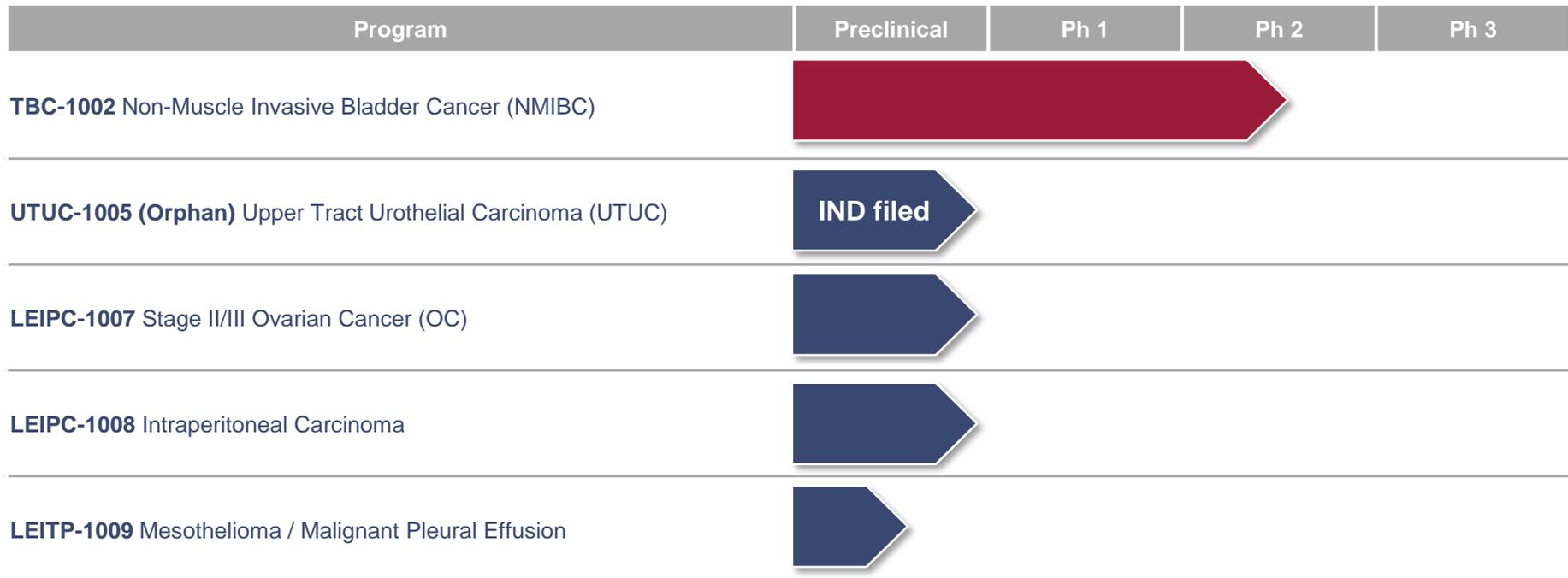
**Dr. Guru Betageri, Ph.D.**  
*Scientific Advisor*

- Inventor of proprietary proliposomal technology
- Professor of Pharmaceutical Sciences at Western University of Health Sciences

# Introducing LIPAC Oncology

- LIPAC is a clinical stage pharmaceutical company employing **LiPax™ (“LiPax”)**, its proprietary proliposomal intravesical paclitaxel drug delivery platform, to **enhance** and reformulate **proven cancer drugs into more effective treatments**
- LiPax, a locally delivered formulation of the paclitaxel, is being developed for **non-muscle invasive bladder cancer** and **other intracavitary cancer indications**
- LiPax has **strong IP** with formulation and patent coverage **until 2037**

## LiPax Pipeline



# I. Limitations in Bladder Cancer Treatment Today

## LiPax: The Future of NMIBC Care

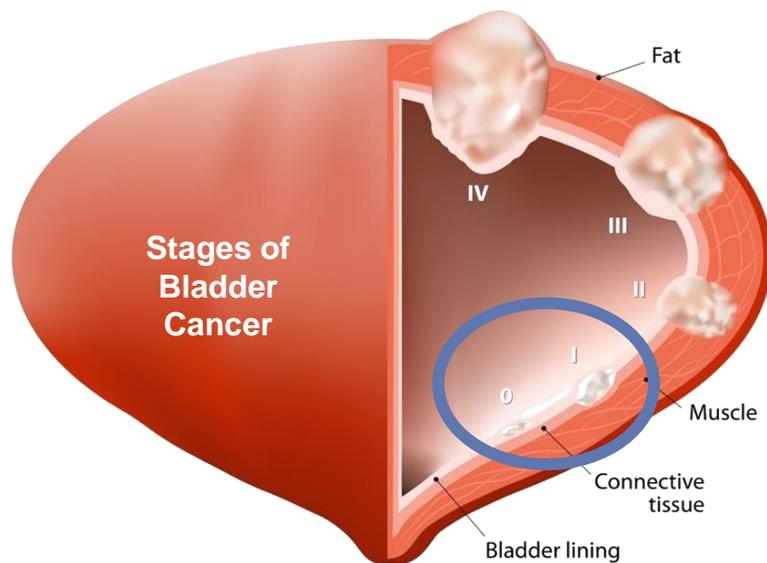
**Today, a NMIBC diagnosis is devastating and crippling as...**

- Recurrence rates are high
- Systemic toxicities are prevalent and result in significant patient discomfort
- Dose limiting toxicities result in poorer patient outcomes
- Therapies cause intense urinary burning and pain
- Treatments are not optimized or formulated for NMIBC
- Leading drugs are in short supply

**But, LIPAC is revolutionizing the treatment space with LiPax, a treatment...**

- Without the pain
- Which delivers high concentrations of an extremely potent and proven chemotherapy
- Without severe systemic toxicities or side effects
- Formulated to persist and penetrate into the urothelium
- With targeted lethality which reduces recurrences and improves patient outcomes
- In development for additional underserved intracavitary cancer indications

# NMIBC – A Large and Underserved Market



~74%<sup>1</sup> of bladder cancer is NMIBC, creating large market potential

## Large Market Potential for Bladder Cancer

- **Bladder Cancer is the 6<sup>th</sup> most common cancer in the U.S. with ~700,000<sup>2</sup> patients diagnosed**
  - 4<sup>th</sup> most common cancer in men and three-times more prevalent in men than in women<sup>3</sup>
  - ~18,000 patients die each year in the U.S.<sup>2</sup>
- 74%<sup>1</sup> of all bladder cancer is non-muscle invasive bladder cancer
  - NMIBC affects over 2 million<sup>1,4</sup> patients globally and over 520,000<sup>1,2</sup> patients in the U.S.
  - Highly recurrent with a 31% - 78%<sup>4</sup> five-year recurrence rate

## High Financial and Emotional Burden of Existing Treatments

- Due to ongoing diagnostic and therapeutic requirements for the recurrent disease, as well as for disease progression, **bladder cancer is expected to remain the most expensive cancer to treat<sup>5</sup>**
- **No new products in over two decades** and no approved products for intermediate-risk NMIBC
- Critical supply shortages, product rationing and price hikes of BCG and MMC limiting access

## II. LIPAC – A Unique, Effective, and Risk-Mitigated Solution

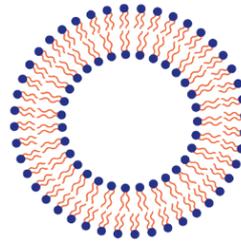
# LiPax Technology Overview

1 Formulation components self-assemble into liposomes upon addition of sterile water diluent

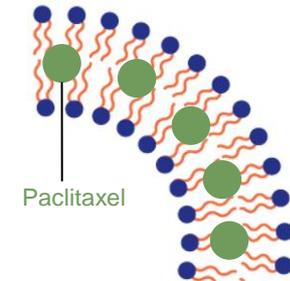


+ H<sub>2</sub>O

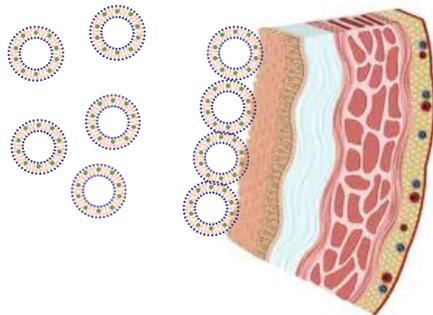
2 Self-assembly is driven by physiochemical properties of surfactant to maximize volume and minimize surface area



3 The API, paclitaxel, intercalates in the lipid rich region of the phospholipid



4 Random motion results in liposomes fusing with the urothelial wall



5 Paclitaxel is off-loaded into the target tissue and penetrates deep into the bladder wall

**Targeted Lethality**

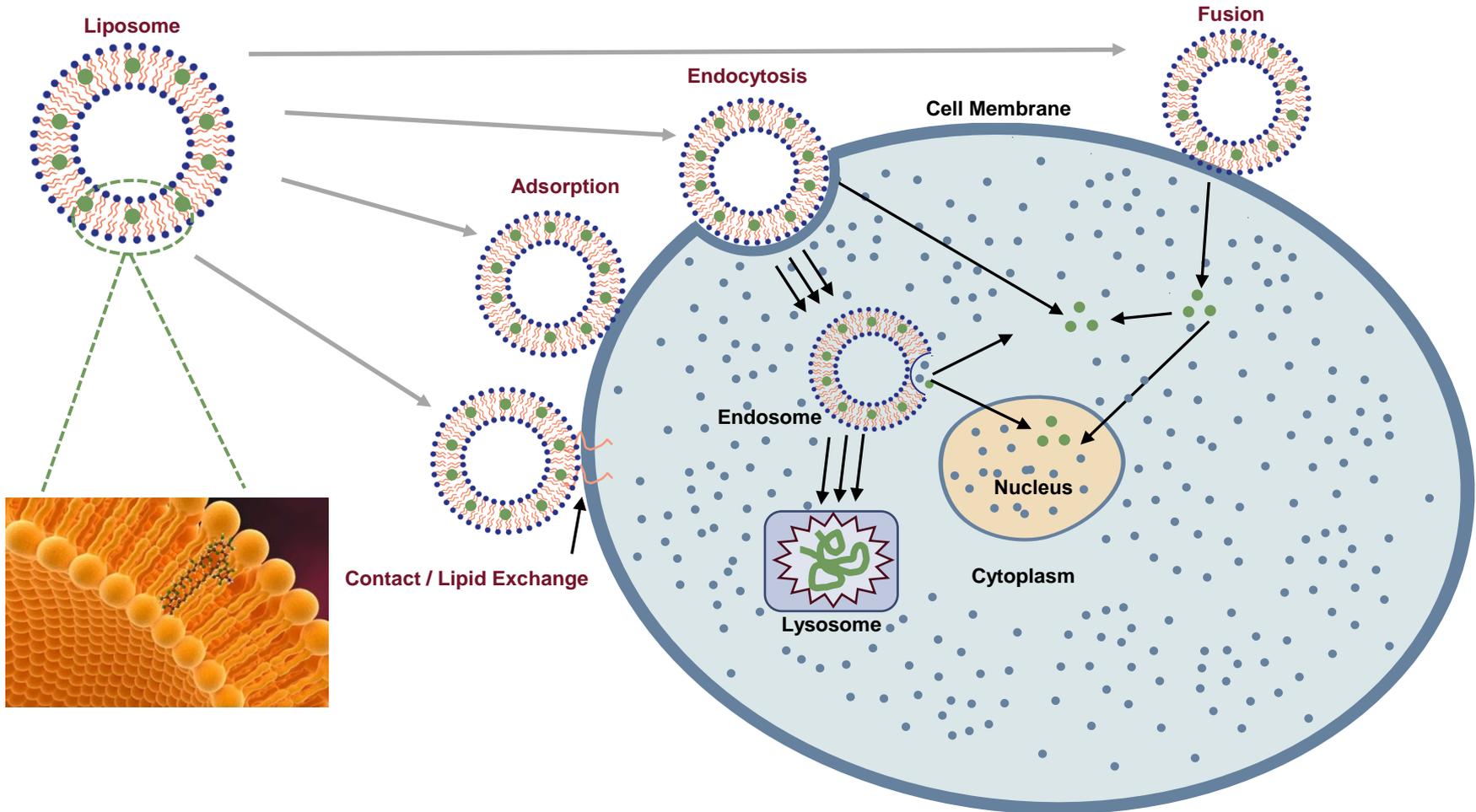
**Bladder Wall**

Enhances T24 cancer cell lethality by:

- 30x against unformulated paclitaxel<sup>1</sup>
- 200x against mitomycin C (MMC)<sup>2</sup>

# Overview of Liposome-Cell Interactions

Liposomes can interact with cells by four different mechanisms. Potentially more than one mechanism can be operative at a time.



# Advantages of LiPax

LiPax overcomes significant challenges of current standards of care

## Advantages of LiPax

Penetration

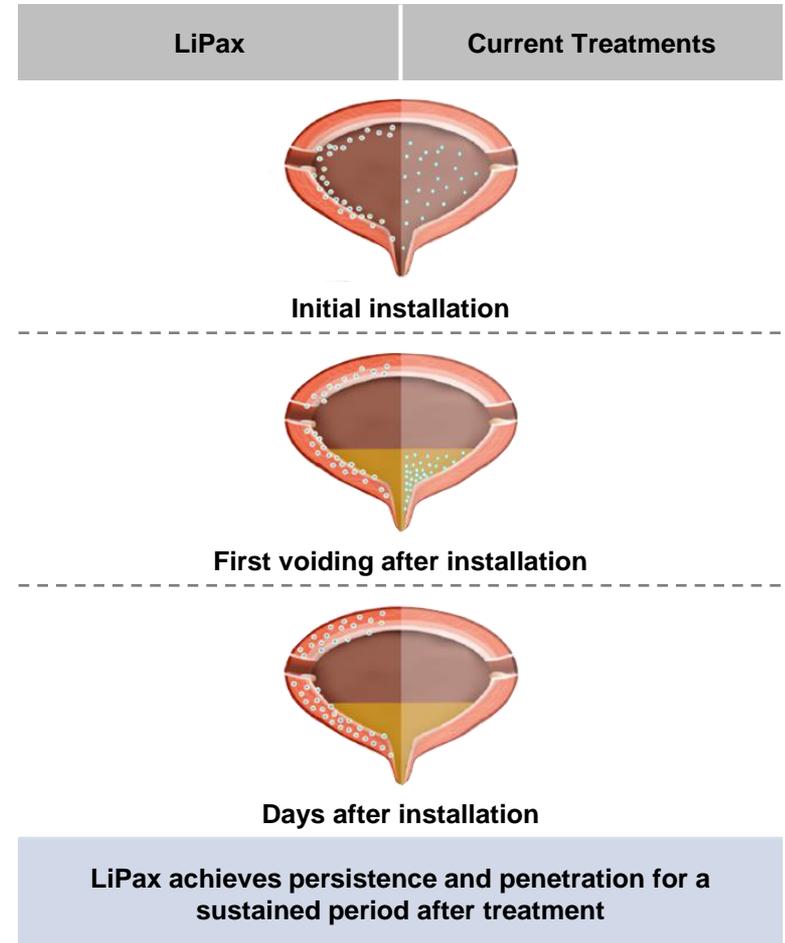
Persistence

Closed System

Effective Formulation

POC Achieved

Known and Proven Paclitaxel API



# LiPax is a Novel Next Generation Formulation of Paclitaxel

**LiPax formulation permits superior localized delivery of paclitaxel without systemic toxicity**

**1<sup>st</sup> Generation – Taxol**  
(\$1.6B Revenue)

- Significant Cremaphor formulation side effects

**2<sup>nd</sup> Generation – Abraxane™**  
(\$1.2B+ Revenue)

- Nano-particle formulation non-optimized solubility and off-loading kinetics
- Approved in 2005 through the 505(b)(2) regulatory pathway

*Side Effects*

 *Low blood count, peripheral neuropathy, sepsis, breathing problems, etc.*

**3<sup>rd</sup> Generation – LiPax**  
(\$B+ Revenue Potential)

- **30x more active** against T24 bladder cancer cells than unformulated paclitaxel<sup>1</sup>
- **Enhanced solubilization** in acidic environment
- **Lipophilic** and adheres to bladder wall
- **Optimized off-load kinetics and intratumoral concentration relative to Abraxane™**
- **Enhanced tolerability**
- **Known to regulatory authorities around the world with 505(b)(2) pathway agreed in the USA**

 *To date, there have been no reported adverse events due to the drug*

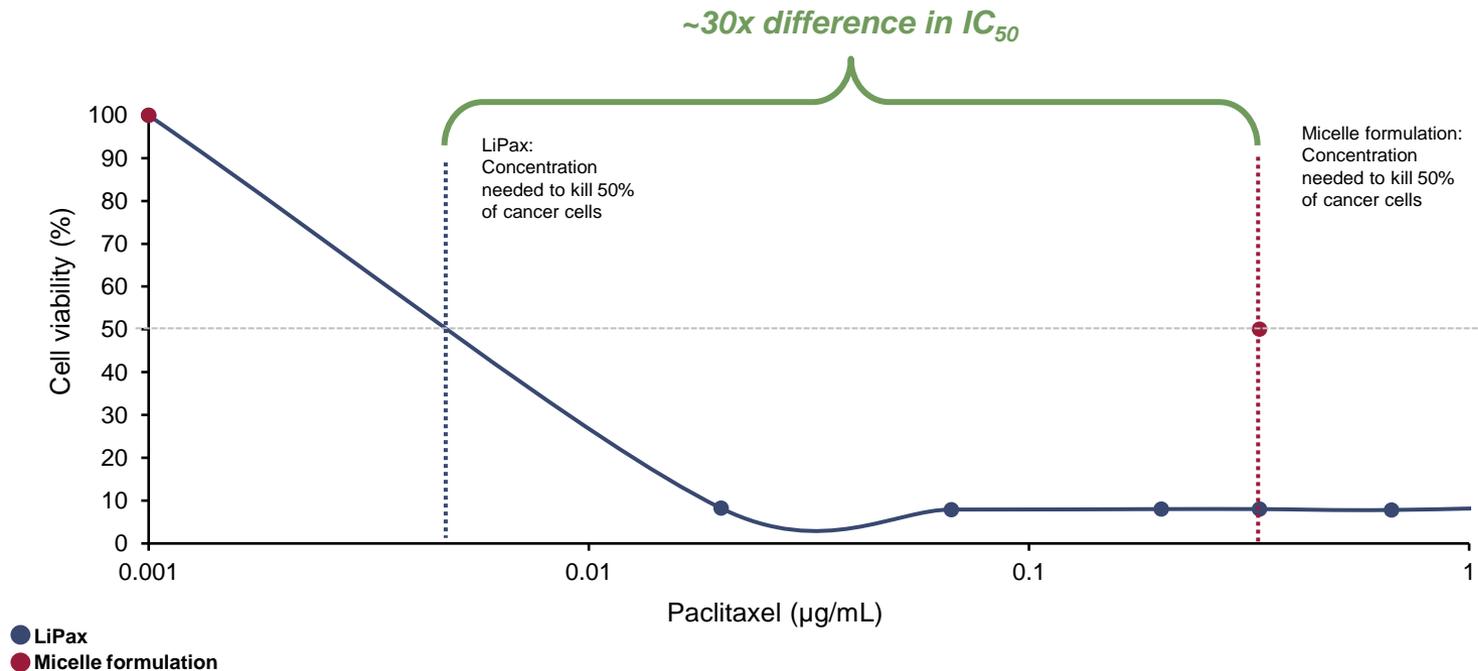
## III. Clinical Overview & Regulatory Pathway

# Proof of Formulation and Increased Activity Against Cancer Cells

LiPax has shown enhanced activity against the bladder cancer cell line while maintaining no systemic exposure or toxicity

## Proof of Formulation

Activity Against T24 Bladder Cancer Cell Line

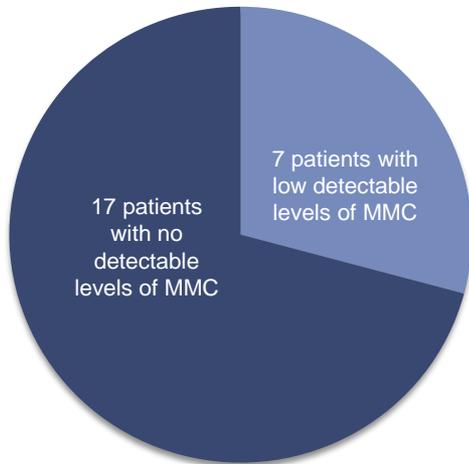


*LiPax shows 30x<sup>1</sup> enhanced activity against bladder cancer cell line vs micelle formulation of paclitaxel*

# Proof of Better Penetration than the Standard of Care

LiPax was found significantly more effective in penetrating urothelial tissue to target tumors as compared to MMC and Abraxane™

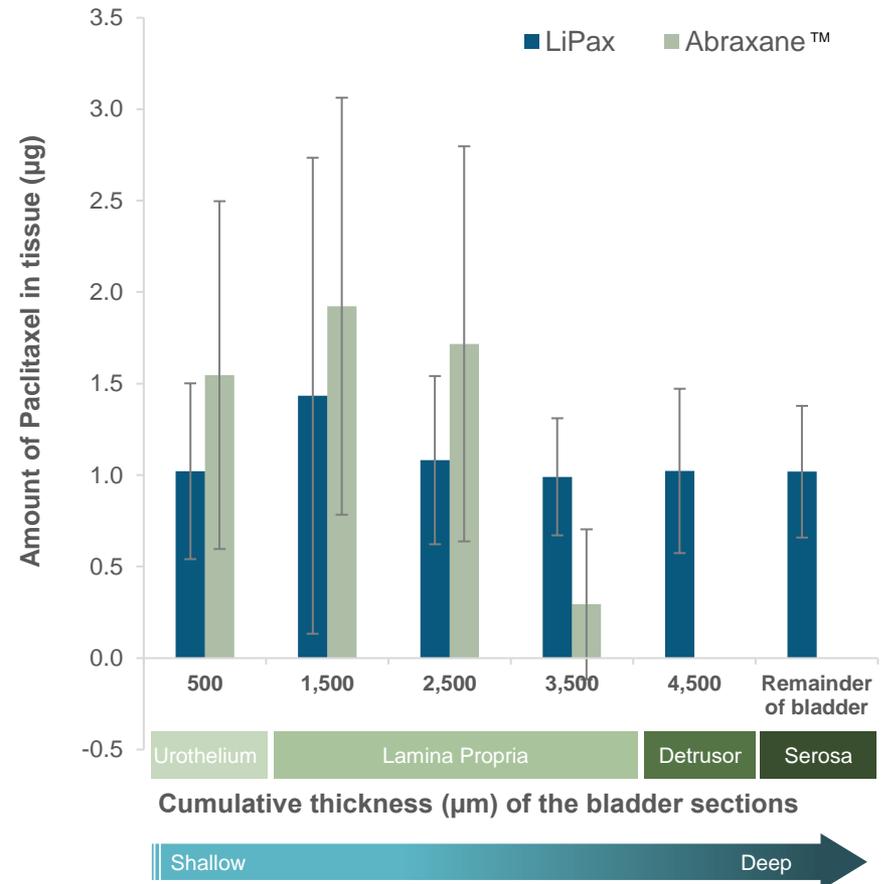
## Human MMC Bladder Penetration Study



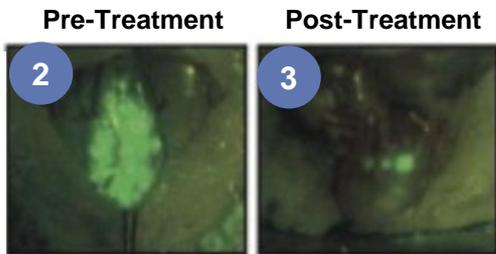
### Methodology

- Bladders were removed from patients treated with intravesical MMC (N=24)
- MMC concentrations were measured at various thicknesses of the bladder wall

## Ex-Vivo Male Porcine Penetration Study

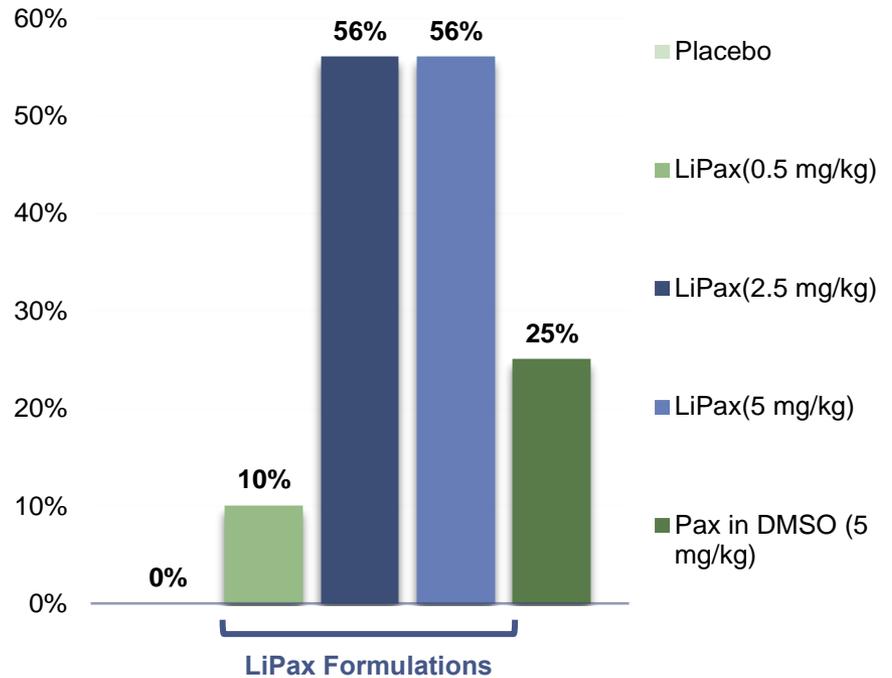


# Proof of Efficacy: Nude Mice Model



Response to Intravascular Therapy

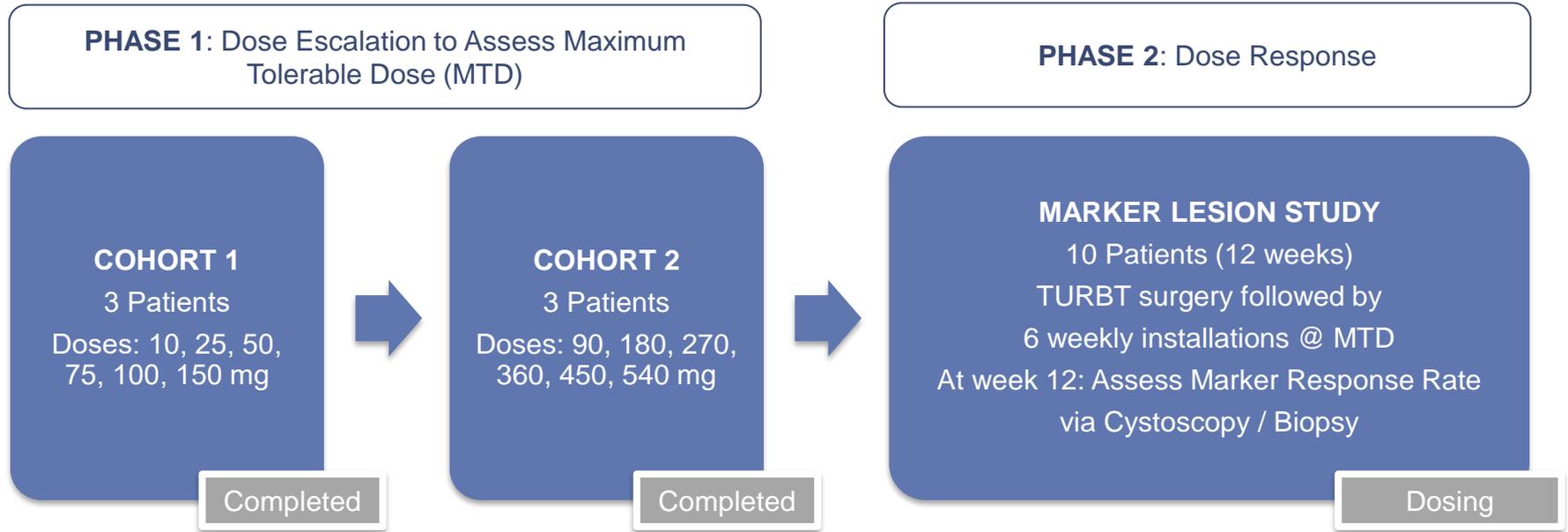
Complete Response (Eradication of Tumor) Rate After Treatment



## Summary

- LiPax achieved a 56% complete response rate with no detectable systemic exposure and toxicity
- LiPax demonstrated high lethality against bladder cancer cells
- No paclitaxel detected in tail vein of nude mouse indicating no systemic exposure

# NMIBC Clinical Program Status



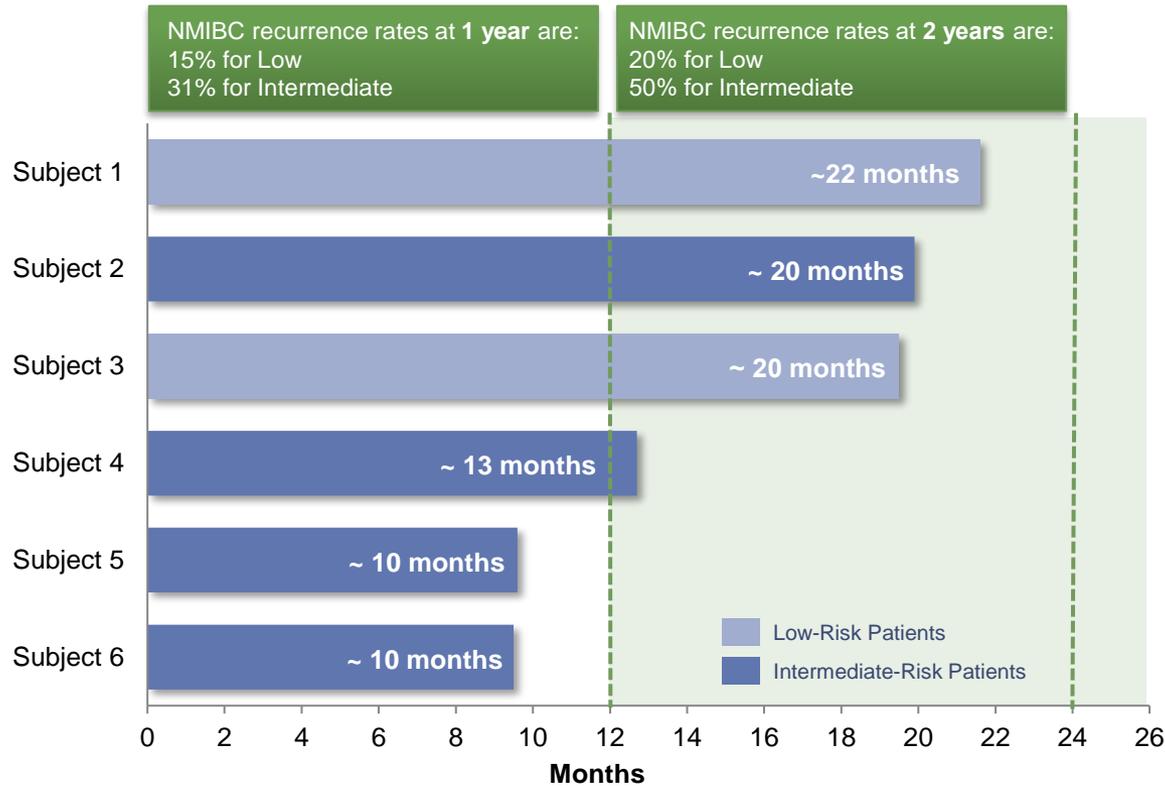
## Current Status

- Part 1 completed with promising results
- Phase 2 marker lesion study started in August 2019 and is expected to be completed by June 2020, and will serve as proof of efficacy
- As of February 26, 2020 ~60% enrollment

# NMIBC Phase 1 Data Indicative of Significant Efficacy with LiPax Administration



## Number of Months That Patients Have Remained Recurrence Free



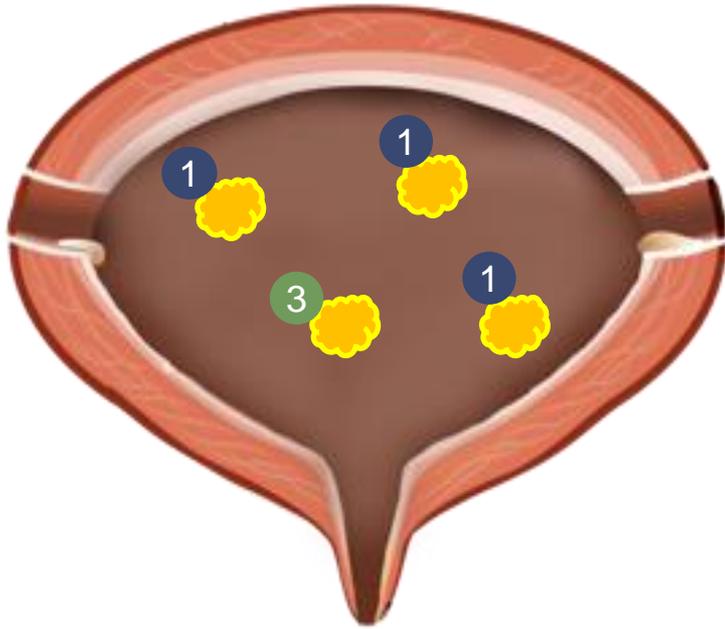
## Safety Data

- No dose limiting toxicities observed in 6 low-intermediate patients dosed with LiPax after TURBT bi-weekly for up to 6 doses
- No reduction in urinary HRQOL observed
- Undetectable paclitaxel systemic side effects despite high and dose proportional urinary levels of paclitaxel
- No transitional cell carcinoma recurrences observed to date

**No patients** have experienced **recurrence of NMIBC** since LiPax treatment while intermediate NMIBC patients recur **31%<sup>1</sup> at one year and 50%<sup>1</sup> at two years** after TURBT and intravesical therapy

## Phase 2 Marker Lesion Study

A 12-week marker lesion study is able to model a 2-year recurrence free rate (i.e., no 2-year study needed)



- 1 Resect all (but one) tumors
2. Treat patients with LiPax
- 3 Cystoscopy / Biopsy to assess responder rate

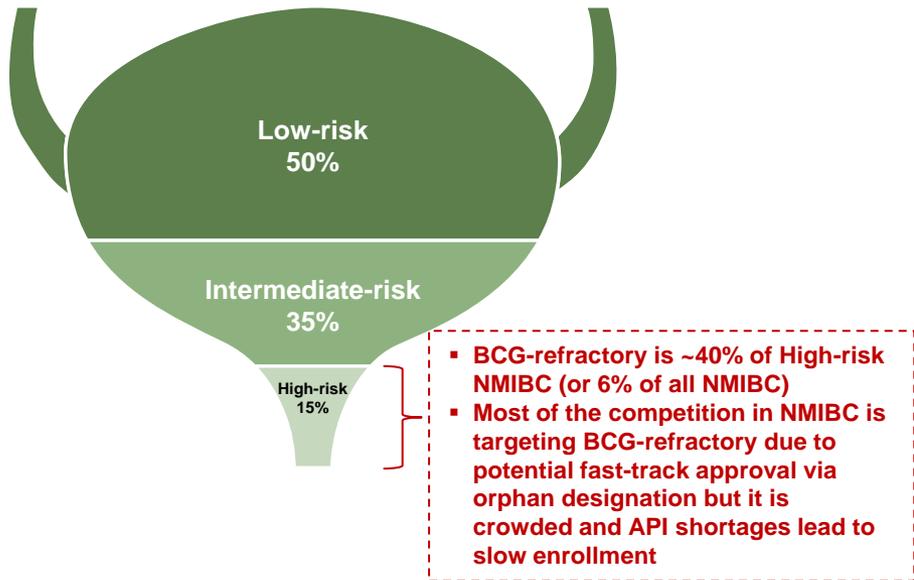
### Marker Lesion Studies are Endorsed by the FDA and Have Proven Predictive Capability

- Marker lesion studies have proven to be an effective predictor of two-year patient outcomes as demonstrated by the Phase 2 study of apaziquone for patients with NMIBC
  - In the study, the CR of the marker lesion in 67% of patients was followed by a recurrence-free rate of 56.5% at 1-year follow up and 49.5% at 2-year follow up<sup>1</sup>
- **Study results will be available by June 2020**

# Favorable Regulatory Pathway

LiPax is targeting low- and intermediate-risk NMIBC, highly underserved indications with significant patient pools and clear regulatory paths forward

## NMIBC Patient Population by Risk Profile<sup>1,2</sup>



- LiPax targets low- and intermediate-risk NMIBC, indications with significant patient pools
  - UroGen’s RTGel™ targets low- and intermediate-risk NMIBC
- BCG is indicated for high-risk NMIBC, CIS
  - Valrubicin is indicated for BCG-refractory CIS
  - Thiotepa is indicated for superficial bladder cancer

## Low / Intermediate-Risk Pathway Advantages

- ✓ **Large Market Opportunity:** Majority of bladder cancer patients are low- and intermediate- risk
- ✓ **Lack of Therapies:** No drugs approved for low- and intermediate-risk NMIBC
- ✓ **Accelerated Approval:** Potential for breakthrough therapy designation from the FDA
- ✓ **Simplified Study Design:** Head-to-head study feasible
- ✓ **Faster Enrollment:** Supply shortages of BCG create study enrollment restrictions for BCG-refractory studies

## Phase 2b / 3 Trial Overview

- **Timeframe:** 2020-2023
- **Study Design:** Head-to-head superiority / comparator trial (LiPax vs. Thiotepa)
- **Enrollment Size:** 350-450 patients
- **Endpoint:** 2-year RFS
  - Positive study = 10% or greater (versus > 30% CR in BCG refractory trials)

# BCG-Refractory NMIBC Landscape

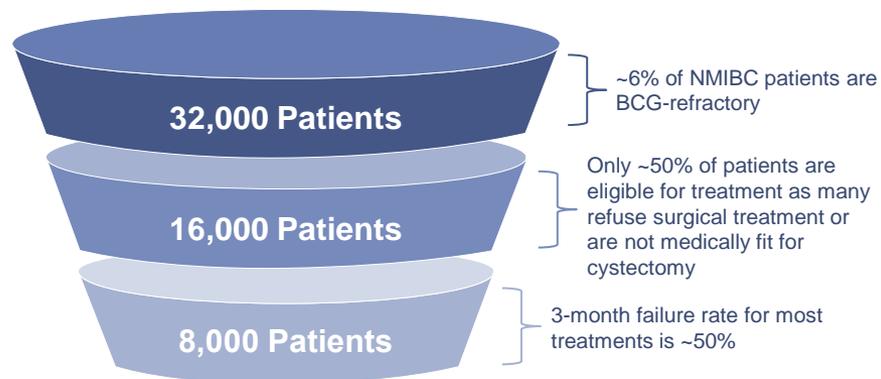
## BCG-Refractory NMIBC is Targeted Because of Potential Fast-Track Approval... However, There are Many Drawbacks

- ✓ **FDA Guidance and Simplified Study Design:** Single-arm Phase 2 design
  - Small number of patients (n~150) and a single registration study
- ✓ **Accelerated Approval:** Potential for Breakthrough Therapy designation from the FDA

- ✗ **Small Market Opportunity:** Only ~6% NMIBC is BCG-refractory
- ✗ **Slow Enrollment:** Supply shortages of BCG create study enrollment restrictions as patient population dependent on BCG drug supply
- ✗ **Crowded Indication:** Many products are in development or near approval for BCG-refractory NMIBC

## BCG-Refractory NMIBC Has a Small Patient Pool<sup>1,2</sup>...

- BCG-refractory standard of care is radical cystectomy with urinary diversion / bladder conservation
  - Gemcitabine / docetaxel is used off-label



**<\$200M**

Maximum peak sales for new BCG-refractory agents is under \$200M in the U.S.

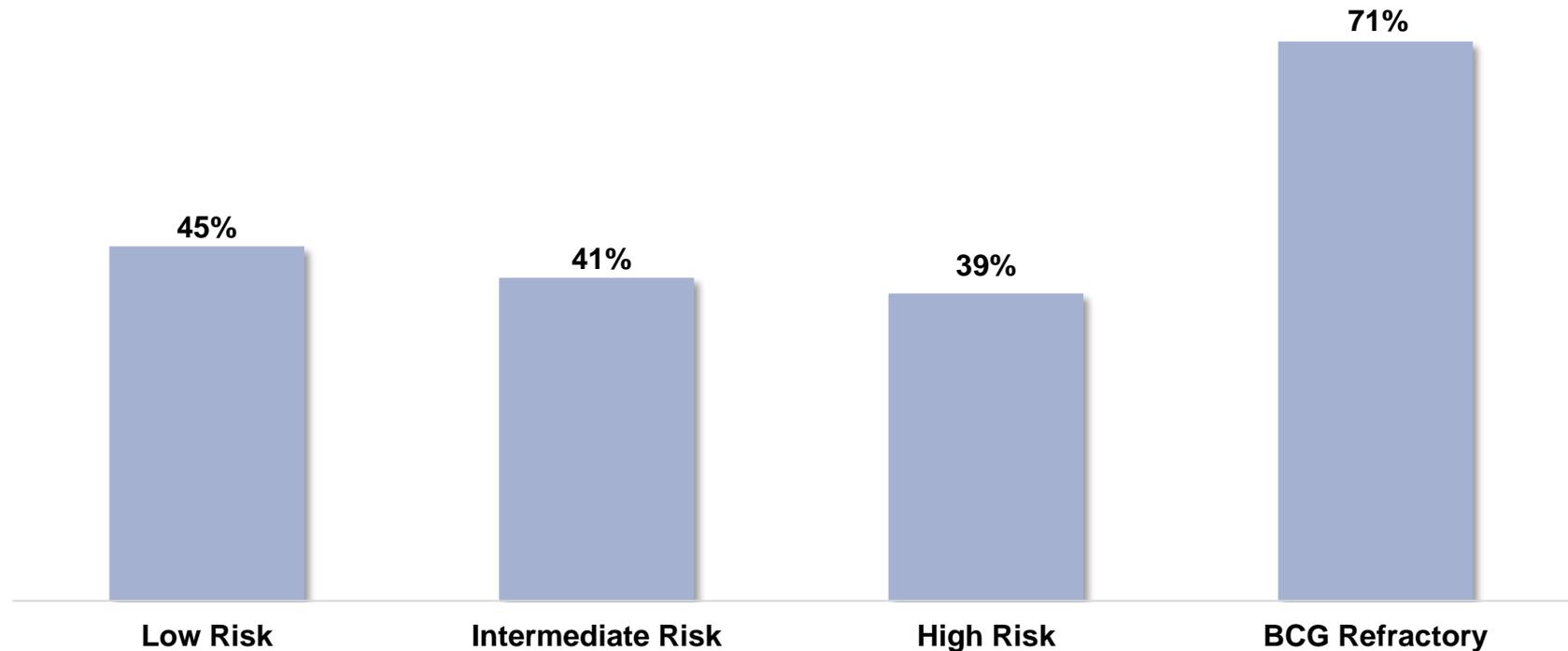
## ... And is an Overcrowded Market with Limited Efficacy

	Keytruda™	FerGene / Instiladrin™	Vicinium™	ALT-803	Opdivo™
Admin. Route	Intravenous every 3 weeks	Intravesical every 3 months	Intravesical; frequency pending on treatment phase	SQ or intravesical every 1-3 weeks	Intravenous every 3 weeks
Systemic AE	Yes	No	Yes	Yes	Yes
Immune AE	Yes	No	No	Yes	Yes
Serious AE	Yes (Death)	No	Yes (Liver and renal failure)	No	Yes (Death)
12 Month CR	40% Ta, 19% CIS +/- Ta/T1	44% Ta 24% CIS +/- Ta/T1	~40% Ta	Not available	Not available
MoA	PD-1 inhibitor	Interferon gene	ABC: EpCAM-toxin	IL-15 protein super agonist	PD-L1 inhibitor

## Strong KOL Interest in LiPax

Quantitative survey of 100 urologists in the US supports LiPax as a frontline therapy for NMIBC

**% of Patients to Receive LiPax**



**Market study suggests that US urologists recommend LiPax to replace 39% to 71% of therapies for all risk stages of NMIBC**

## IV. Competitive Landscape

# NMIBC Treatment Landscape

The current post-TURBT drug treatment regimens are **lacking** and have **severe shortcomings** for both patients and healthcare providers

	BCG* (\$150 / dose) <sup>1</sup>	Mitomycin C (\$1,400 / dose) <sup>2</sup>	Thiotepa (\$1,600 / dose) <sup>2</sup>	Valrubicin (\$5,000 / dose) <sup>3</sup>	LiPax™
Indicated for 1 <sup>st</sup> Line NMIBC Low- and Intermediate-Risk Patients	✗	✗	✗	✗	✓
No Fume Hood Required	✓	✗	✗	✗	✓
Adequate Supply	✗	✗	✓	✓	✓
No Dose Limiting Toxicities	✗	✗	✗	✗	✓
No Systemic Toxicities	✗	✗	✗	✗	✓
Demonstrated Deep Penetration Into the Bladder Wall	Unknown	✗	✓	✗	✓

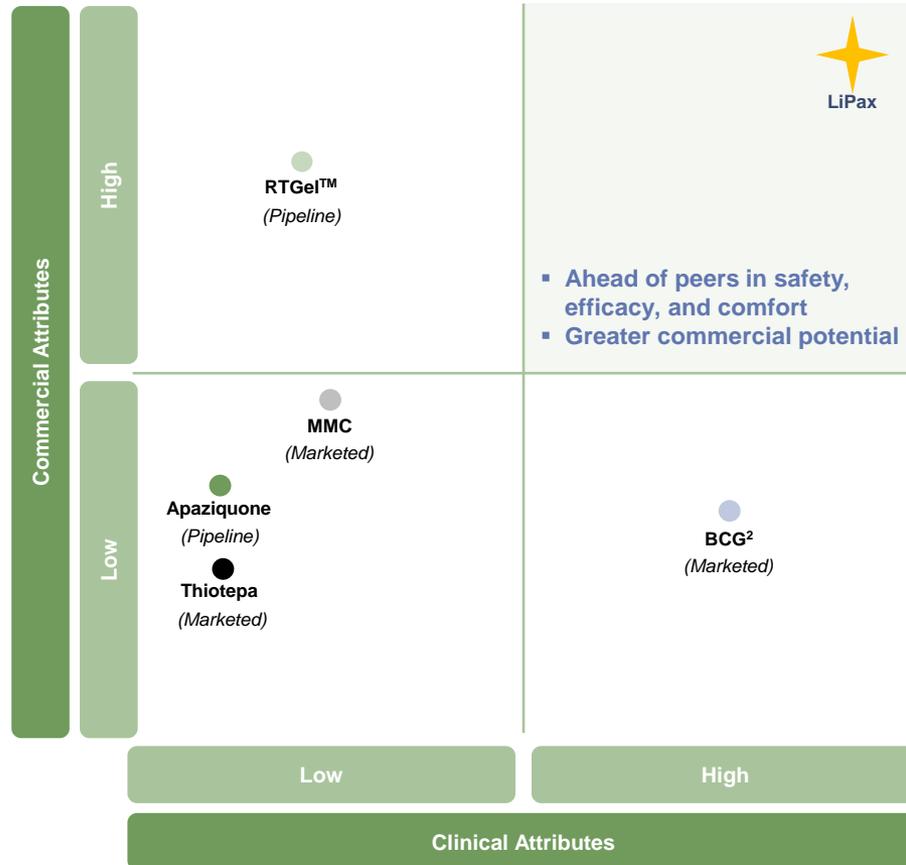
Note: \*BCG is hard to procure due to limited supply.

Sources: 1. Washington Post. 2. [https://www.nejm.org/doi/full/10.1056/NEJMp1615697?url\\_ver=Z39.88-2003&rfr\\_id=ori%3Arid%3Aacrossref.org&rfr\\_dat=cr\\_pub%3Dpubmed](https://www.nejm.org/doi/full/10.1056/NEJMp1615697?url_ver=Z39.88-2003&rfr_id=ori%3Arid%3Aacrossref.org&rfr_dat=cr_pub%3Dpubmed) 3. [https://www.accessdata.fda.gov/drugsatfda\\_docs/label/2011/020892s013lbl.pdf](https://www.accessdata.fda.gov/drugsatfda_docs/label/2011/020892s013lbl.pdf)

# LIPAC is an Attractive, De-Risked Investment Opportunity With Strong Competitive Advantages and Near-Term Value Milestones



## Competitive Landscape Overview<sup>1</sup>



## Main Competitor Analysis

- RTGel™, LiPax's main competitor in the low- and intermediate- risk NMIBC space, has significant clinical short comings
  - Less Effective:** Unformulated MMC 40mg had higher CR rate than 40mg MMC RTGel™
  - API Undesirable:** MMC has poor penetration leading to less effective patient outcomes and is not efficacious for metastatic bladder cancer
  - Patient Discomfort:** Serious adverse events have been reported including rash, burning sensation, urgency in urination, and pain during urination

Notes: 1. Does not include BCG-refractory and high-risk treatments including Keytruda, Tecentriq, CAVATAK, ABI-009, VALSTAR, Vicinium, INSTILADRIN, CG-0070 and N-803 2. BCG is approved for the treatment of high-grade papillary NMIBC.

# LiPax has Significant Advantages Over UroGen's RTGel™

**UroGen's RTGel™ is the main competitor to LiPax for low- to intermediate- risk NMIBC**

	LiPax	RTGel™
Active product ingredient	Paclitaxel	Mitomycin C (MMC)
API active against metastatic bladder cancer <sup>1</sup>	Yes, 40% response rate	No approved indication
API stability in urine <sup>2</sup>	Stable	Degrades
API $C_{urothelial} / C_{urine}$ partition coefficient <sup>3</sup>	0.5 (lipophilic)	0.02 (hydrophilic)
Penetration of lamina propria <sup>4</sup>	Excellent	Poor
Systemic exposure after intravesical instillation <sup>4</sup>	Not detected	Present
Duration of intravesical persistence <sup>5</sup>	Up to 72 hours	Several hours
Urinary bother / tolerability <sup>5</sup>	No change in patient reported outcome: OAB-q and IPSS; No dose limiting toxicity	Dysuria and frequency; dose limited toxicity at 0.2% MMC / RTGel™

**LiPax has demonstrated best-in-class potential in terms of formulation, penetration, and tolerability with responder rates to be established by 1Q 2020**

# Concerns Surrounding UroGen's Clinical Pipeline

## UroGen has a Small Market Opportunity and Problematic Side Effects in UTUC Indication...



Small universe of patients (~2,000 per year) significantly reduces commercial value



API used in RTGel™, MMC, strictures ureter leading to severe patient side effects often requiring indwelling stent

## With Deep Commercial and Clinical Concerns Around NMIBC Indications



Lack of tumor removal is unappealing to physicians and results in multiple downstream consequences



UroGen's treatment plan contradicts medically accepted guidelines



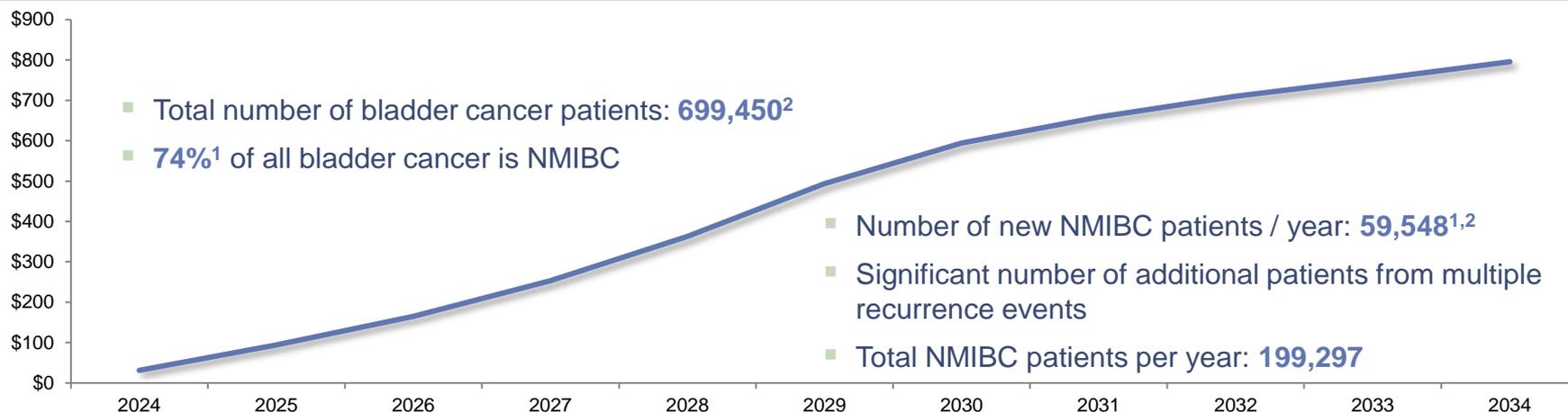
Superiority trial needed in order for urologists to change their standard of care resulting in increased costs, prolonged approval time, and decreased approval likelihood

## V. Why Invest in LIPAC?

# Significant Revenue Potential Driven by Large Unmet Need

Independent revenue forecast suggests ~\$800M peak net revenue for NMIBC in the U.S.

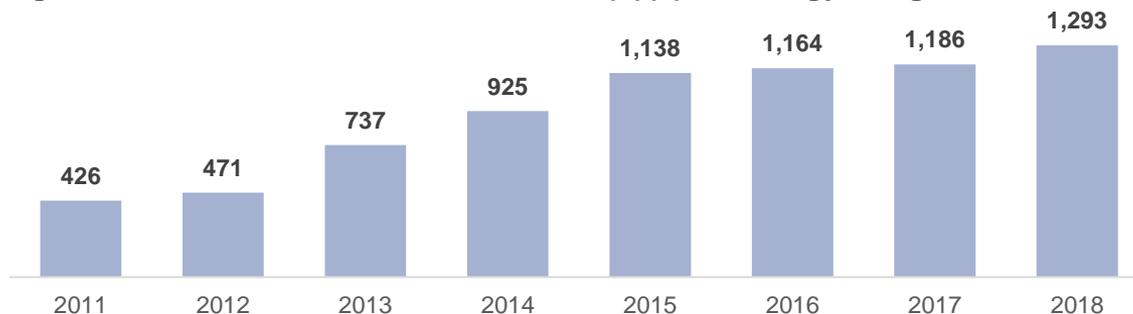
## LiPax Net Revenue (\$M)<sup>1</sup>



**Forecast peak net revenue for NMIBC is projected to exceed \$1.5 billion globally**

## Reference Point: Abraxane™ Net Revenue (\$M)<sup>3</sup>

### Significant Revenue Potential From 505(b)(2) Oncology Drug



## Likelihood of Approval<sup>4</sup>

Likelihood of approval is higher for non-new molecular entity (NME) drugs which often use the 505(b)(2) pathway to gain FDA approval

	Ph 1 to Approval	Ph 2 to Approval
Oncology (all approval pathways)	5.1%	8.1%
All Indications (all approval pathways)	9.6%	15.3%
NME	6.2%	10.1%
Non-NME	22.6%	32.2%

# Precedence for Public Market Support in NMIBC & UTUC Indications

**UroGen has successfully raised \$280M+ via the public markets to advance its clinical trials**



## Analyst Concerns Regarding UGN-102 (NMIBC)

*“Recall, no '102 DOR data and little Ph 3 design info were provided at the Sep. 24th Analyst Day, sending the stock down 35%+ in the weeks following. Now, URGN is finalizing a H2H Ph 3 pivotal trial design of '102 vs TURBT w/ the 1EP of DOR at 12(+?) mos... We note that **superiority would require a larger trial for sufficient statistical powering and reduced variability, potentially putting our assumed '24 launch at risk.** Importantly, **we see added clinical risk and a smaller market for '102 than our pre-Analyst Day expectations.** We now model peak, risk-unadjusted US sales of \$205M vs \$423M prev.”*

**Jefferies** Nov 13, 2019

## LIPAC is the More Attractive Opportunity

- ✓ Utilizes **more effective API** with **no supply issues** or risk of price hikes
- ✓ **Lipophilic** properties lead to better bladder tissue **penetration & persistence; no reported systemic toxicity** and better patient outcomes
- ✓ Head-to-head study against Thiotepa **aligns with and enhances standard of care**

# LIPAC is a Compelling Investment Opportunity with Multiple Significant Near-Term Value Milestones



## Summary Investment Highlights

**1 Differentiated Opportunity in Bladder Cancer with Clinical Success**

**2 Enhances the Standard of Care for Bladder Cancer**

**3 Large Unmet Need Drives Significant Revenue Potential**

**4 Strong Management Team with Extensive Industry Experience**

**5 Key Partnerships with Global Pharmaceutical Companies Offer Commercial Validation**

## Key 2020 Value Inflection Points

- **NMIBC**
  - Phase 2a marker lesion response data
  - Commence Phase 2b trial
- **UTUC**
  - Commence Phase 1/2a trial
- **Ovarian Cancer**
  - File IND and commence Phase 1/2a trial
- **IPO & International Licensing Deal**

## Key 2021 Value Inflection Points

- **NMIBC**
  - Phase 2b dose response data
- **UTUC**
  - Phase 1/2a data
- **International Licensing Deal**

## Key 2022 Value Inflection Points

- **Ovarian Cancer**
  - Phase 2 data
- **International Licensing Deal**

**NMIBC NDA Filing in 2023**

# Appendix

# Recent Developments in the Bladder Cancer Space

	Recent Development	Commentary
11-25-19	<ul style="list-style-type: none"> <li>Ferring Pharmaceuticals announced spinout of FerGene</li> <li>FerGene to focus on development of nadofaragene firadenovec for high-grade, BCG-unresponsive NMIBC</li> <li>Ferring and Blackstone Life Sciences announced \$570+ million investment in FerGene</li> </ul>	<ul style="list-style-type: none"> <li>Indicated for small patient pool</li> <li>Potential for slow physician uptake as medical professionals have limited exposure to gene therapies and may be hesitant to prescribe over more familiar treatment methods</li> </ul>
12-04-19	<ul style="list-style-type: none"> <li>ImmunityBio granted FDA Breakthrough Therapy Designation from the FDA for N-803 in combination with BCG for BCG-unresponsive NMIBC, CIS</li> </ul>	<ul style="list-style-type: none"> <li>Indicated for small patient pool</li> <li>Combination therapy with BCG which has critical supply shortages</li> </ul>
12-09-19	<ul style="list-style-type: none"> <li>Sesen Bio initiated rolling submission of Biologics License Application to FDA for Vicinium for the treatment of BCG-unresponsive NMIBC</li> </ul>	<ul style="list-style-type: none"> <li>Indicated for small patient pool</li> <li>Concerns around efficacy and side effects</li> </ul>
12-18-19	<ul style="list-style-type: none"> <li>FDA granted accelerated approval to Seattle Genetics' and Astellas' PADCEV for people with locally advanced or metastatic urothelial cancer</li> </ul>	<ul style="list-style-type: none"> <li>Approved ~3 months early</li> <li>\$110K-\$120K per treatment</li> </ul>
01-08-20	<ul style="list-style-type: none"> <li>FDA approved Merck's Keytruda for BCG-unresponsive, high-risk NMIBC, CIS</li> </ul>	<ul style="list-style-type: none"> <li>FDA panelists expressed concerns about efficacy, specifically the clinical meaningfulness of CR rates</li> <li>Safety concerns as Keytruda has severe side effects</li> <li>May alter Merck's strategy with BCG production</li> </ul>
01-24-20	<ul style="list-style-type: none"> <li>Roche's Tecentriq failed a solo trial aimed at reducing the risk of cancer progressing or returning in patients with muscle-invasive urothelial cancer who had undergone surgery</li> </ul>	<ul style="list-style-type: none"> <li>In the phase 3 trial, Tecentriq did not show benefit when compared with simple observation at delaying the time to cancer recurrence or death, the study's primary endpoint</li> </ul>
03-06-20	<ul style="list-style-type: none"> <li>AstraZeneca announced that the Phase 3 trial for Imfinzi and Imfinzi plus tremelimumab in unresectable, Stage IV (metastatic) bladder cancer did not meet primary endpoints</li> </ul>	<ul style="list-style-type: none"> <li>In 2017, granted accelerated approval by the FDA for patients with locally advanced or metastatic bladder cancer with disease persistence despite use of platinum-containing chemotherapy</li> <li>AstraZeneca is continuing additional trials of Imfinzi for bladder cancer patients</li> </ul>
03-12-20	<ul style="list-style-type: none"> <li>National Institute for Health and Care Excellence recommended against routine use of Keytruda for locally advanced or metastatic urothelial carcinoma</li> </ul>	<ul style="list-style-type: none"> <li>Treatment for adults who had platinum-containing chemotherapy</li> <li>Cited uncertainty surrounding long-term benefit of second-line immunotherapy treatment</li> </ul>

**Recent approvals and developments are in the overcrowded high-risk / BCG-unresponsive NMIBC space and do not address the large unmet need in low- / intermediate-risk NMIBC which LIPAC is targeting**

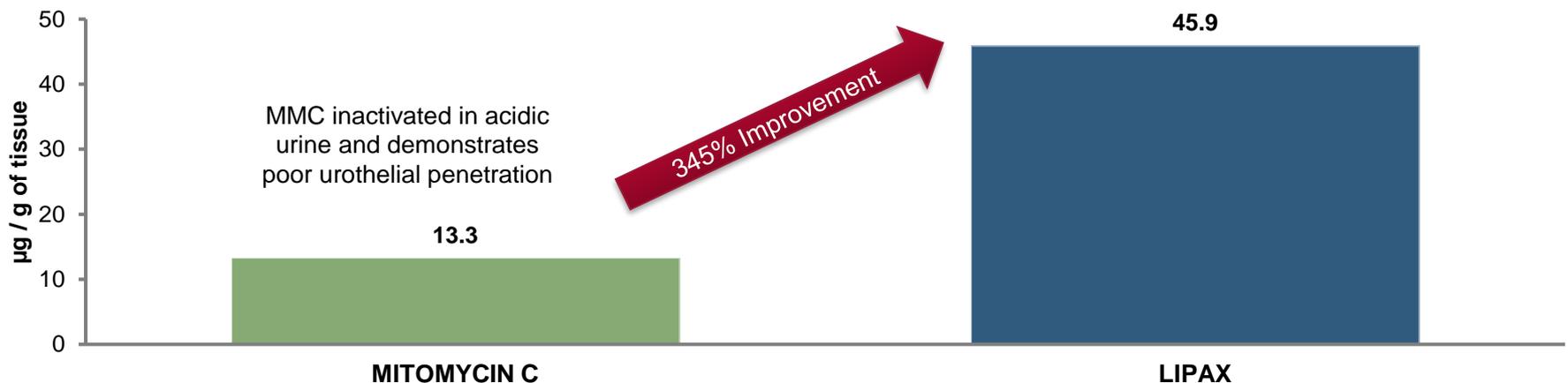
# Upper Tract Urothelial Carcinoma

## Overview

- Orphan disease with incidence of 5-10% of all urothelial carcinoma (5,000 – 10,000 cases / year)
- More aggressive than bladder cancer
- Standard of care is radical nephroureterectomy (RNU)
- No drugs are thought to be efficacious for the treatment of UTUC
- LiPax has demonstrated 345% greater drug concentration in porcine ureter study than MMC

## Average Amount of Drug ( $\mu\text{g}$ ) in Three Ureters per g of Tissue

Ex-Vivo study confirms LiPax has superior penetration into ureter vs. standard of care (MMC)



# Stage II / III Ovarian Cancer

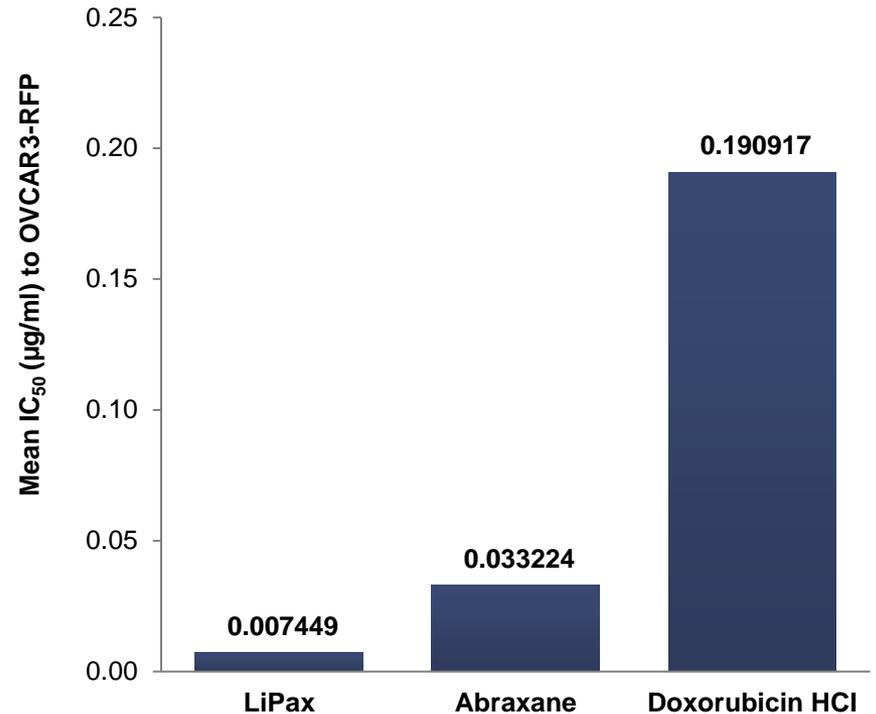
Ovarian cancer patients often have a poor prognosis with limited treatment options; LIPAC hopes to change that

## Overview

- Three RPCT have established that intraperitoneal instillation is superior to intravenous chemotherapy for patients with small volume residual disease after cytoreductive surgery
- Barriers to current standards of care: (1) toxicity and (2) technical expertise with IP device
- IP drug exposure much higher than can be delivered via intravenous/systemic route of administration:
  - >1000x for IP paclitaxel
  - >10-20 fold for cisplatin
- Overall survival advantage: 65.6 mo vs 49.7 mo, p=0.017

## Concentration Required to Kill 50% of Cancer Cells

LiPax has demonstrated much greater potency against current chemotherapies for ovarian cancer



# Mesothelioma / Malignant Pleural Effusion



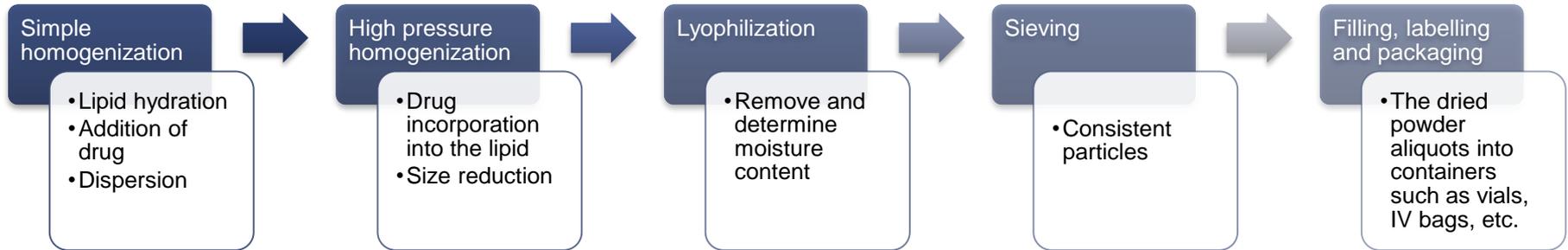
## Overview

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- Severe cancer with poor patient outcomes
- Current SOC is IV chemotherapy
  - Barrier
  - Toxicity
- Surgery time and technical expertise
- LiPax presents simpler installation via thoracotomy tube
- In vitro studies indicate that mesothelioma cells are very sensitive to LiPax

# Manufacturing Process

## Process Flow Chart



## Manufacturing Process Utilizes Common Industry-Standard Equipment

