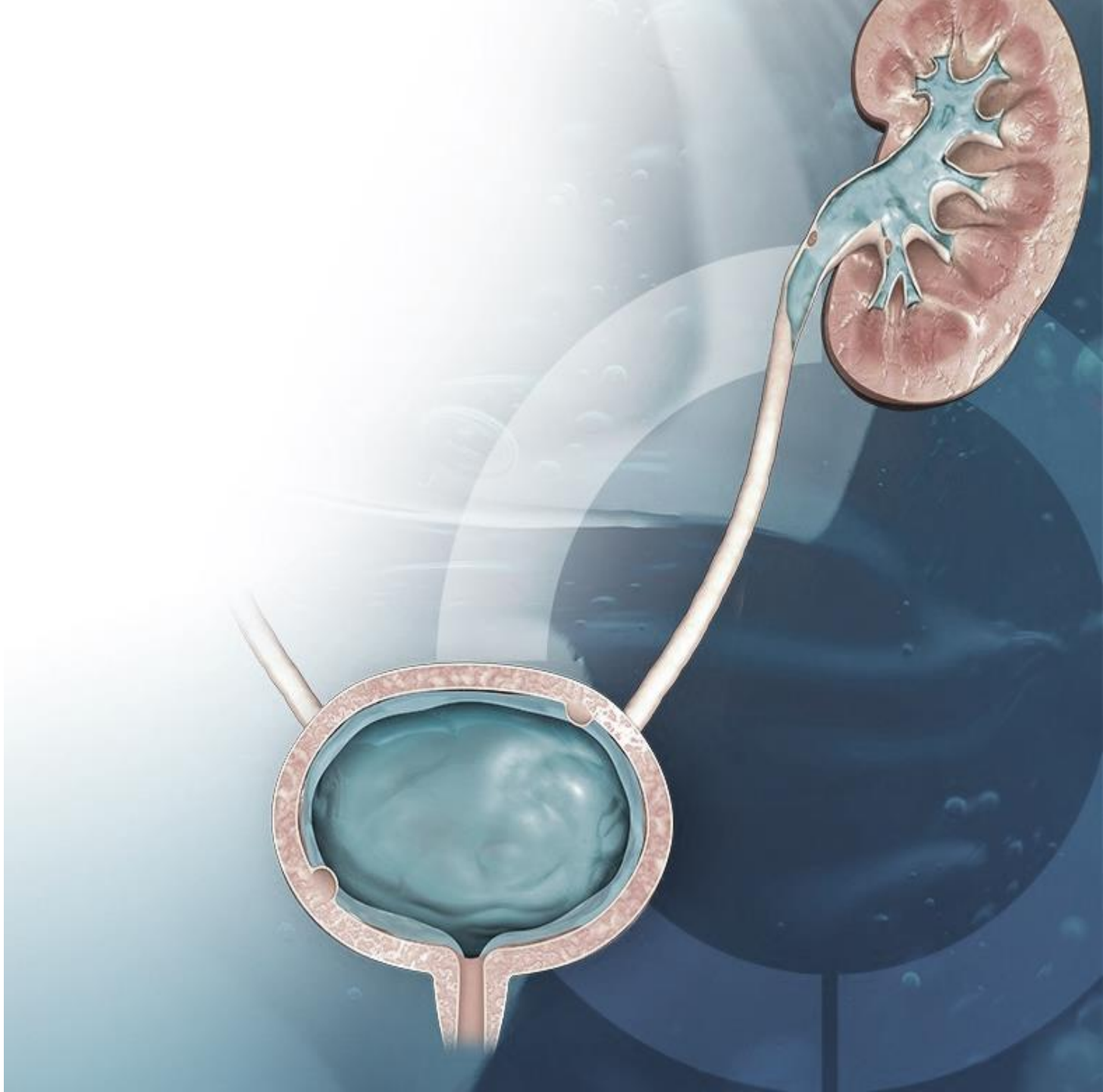
UroGen Pharma

A Mission to Revolutionize Treatment in Uro-Oncology

March 2018



Forward-Looking Statements

This presentation and the accompanying oral presentation by UroGen Pharma Ltd. ("UroGen") contains forward-looking statements. All statements contained herein other than statements of historical fact constitute forward-looking statements, including statements regarding UroGen's anticipated results of operations and financial position, business strategy and operating plans and UroGen'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 UroGen, including with respect to the efficacy and safety of UroGen's product candidates; UroGen'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 UroGen's product candidates; UroGen's ability to obtain and maintain intellectual property protection for its product candidates; UroGen's anticipated growth strategies; UroGen's expectations regarding competition; the anticipated trends and challenges in UroGen's business and the markets in which it operates; UroGen's ability to attract or retain key management and personnel; the size and growth of the potential markets for UroGen's product candidates and its ability to serve those markets; the rate and degree of market acceptance of UroGen's product candidates vis-à-vis alternative or existing therapies; UroGen's expectations regarding regulatory requirements; developments in applicable regulatory regimes; and the manner in which UroGen intends to use its cash resources and the sufficiency thereof. Moreover, UroGen operates in a very competitive and rapidly changing environment in which new risks emerge from time to time. It is not possible for UroGen's management to predict all risks, nor can UroGen 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 UroGen's actual results could differ materially and adversely from those anticipated or implied by the forward-looking statements contained herein. Except at required by law, UroGen undertakes no obligation to update any such forward-looking statements after the date hereof to conform to actual results or changes in UroGen's expectations.

About UroGen

- Clinical-stage biopharmaceutical company developing advanced non-surgical treatments to address unmet needs in the field of urology, focusing on uro-oncology.
- Developed **RTGel™**, a proprietary sustained release, hydrogel-based platform technology that has the potential to be used in a range of body cavities in which increased dwell time has the potential to improve therapeutic profiles of existing drugs.
- Lead investigational therapies in clinical trials for non-surgical removal of tumors in several forms of non-muscle invasive urothelial cancer
  - **UGN-101** (MitoGel™) for the treatment of Low-Grade Upper Tract Urothelial Carcinoma (UTUC)
  - **UGN-102** (VesiGel™) for the treatment of Low-Grade Non-Muscle Invasive Bladder Cancer (NMIBC)

The Management Team:
Experience in Oncology Drug Development & Business Efficiencies

Arie Belldegrun, MD, FACS
Chairman

Ron Bentsur
Chief Executive Officer

Gil Hakim
President, Israeli Operations

Gary Titus
Chief Financial Officer

Mark Schoenberg, MD
Chief Medical Officer

Stephen Mullennix
Chief Operating Officer

Christine Cassiano
Corporate Affairs Officer

Elyse Seltzer, MD
SVP, Clinical Development

Paul Chu
VP, Business Development

Jeffrey Bova
VP, Commercial

James Ottinger, R.PH
VP, Regulatory Affairs

The Board of Directors: Established Industry Leadership

Arie Belldegrun, MD, FACS
Executive Chairman

Ron Bentsur
Chief Executive Officer

Kate Falberg
Audit Committee Chair

Cynthia Butitta

Fred Cohen, MD

Stuart Holden, MD

Ran Nussbaum

Our Strategy to Revolutionize Treatment in Uro-Oncology

1. **RTGel: Leverage innovative technology platform technology with potential for use beyond oncology to improve therapeutic profiles of existing drugs in a range of body cavities**
2. **UGN-101: Obtain first U.S. Food & Drug Administration (FDA) approval for the treatment of UTUC (FDA Orphan Drug & Fast Track Designations Granted)**
3. **UGN-102: Change the treatment paradigm for low-grade NMIBC**
4. **UGN-201: Develop immunotherapy drug to treat high-grade urothelial carcinoma**

Our Innovative RTGel Technology Platform

RTGel[(1)]: Liquid at low temperature (LT) and converts into gel form at body temperature (BT) following intravesical instillation

Storage
Room temperature
Gel form

Pre-Instillation
Low temperature
Gel to Liquid form

During Instillation
Low temperature
Liquid form

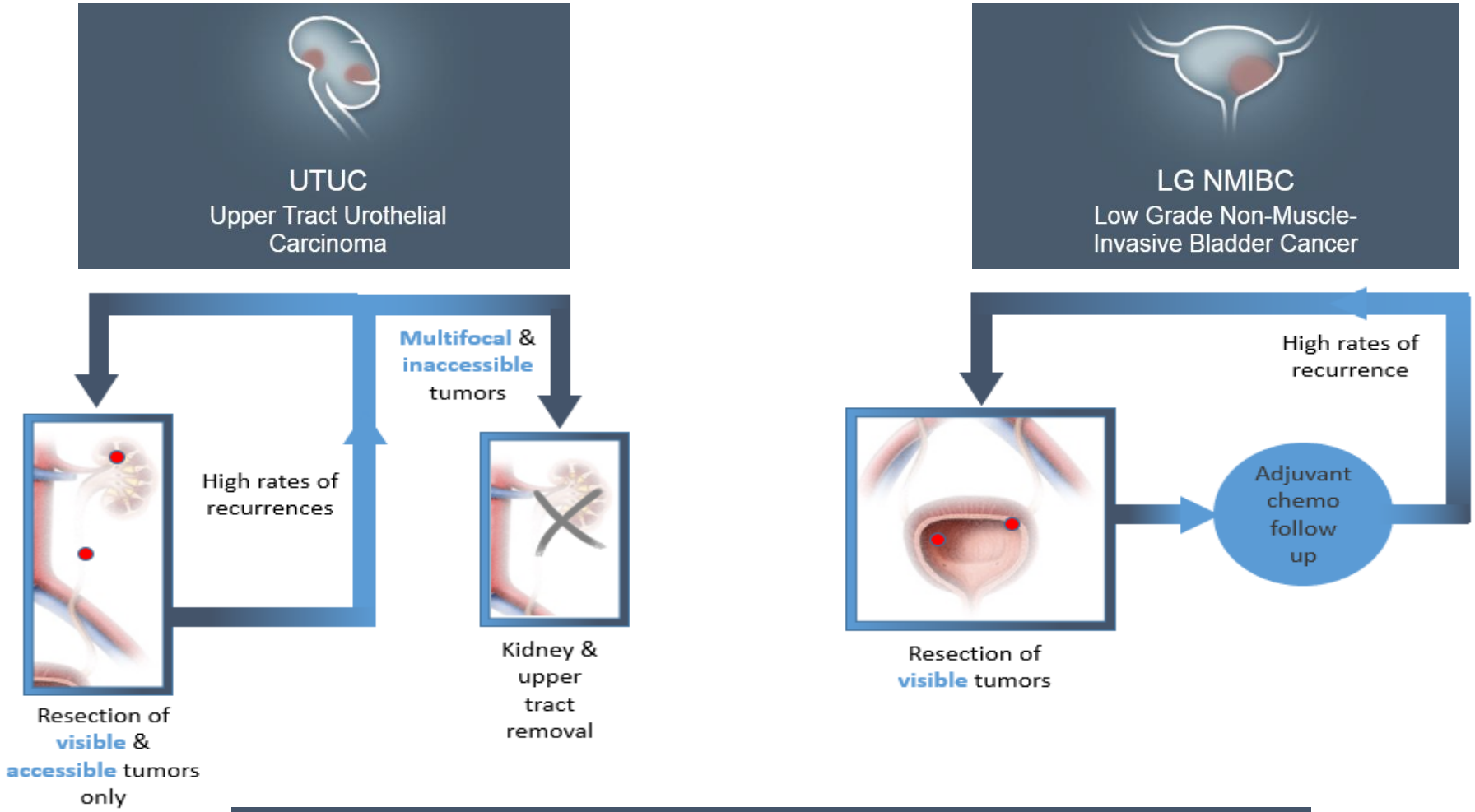
Post-Instillation
Body temperature
Liquid to Gel form

In Bladder/Upper Tract
Body temperature
Gel form

(1) RTGel: Reverse Thermal Gelation Hydrogel.

UroGen Pharma

Current Standard of Care for UTUC & NMIBC



Repeated Cycle of Surgical Therapy in Urology

UroGen Pharma

Limitations of Current Treatment Options & Procedures

UT Physiology Limits Drug Exposure

Upper Tract = ~ 5 Minutes

Bladder = ~ 30 Minutes

- Constant urine creation
- Bladder and upper tract movement
- Voiding
- Drug washes out before it has a chance to work properly

UT Anatomy Limits Surgical Therapy

Upper Tract = Intricate Structures

Bladder = Hard to See All Tumors

- Renal pelvis anatomy makes it hard to see and reach all tumors
- Not all bladder tumors are easily seen, making complete tumor resection difficult

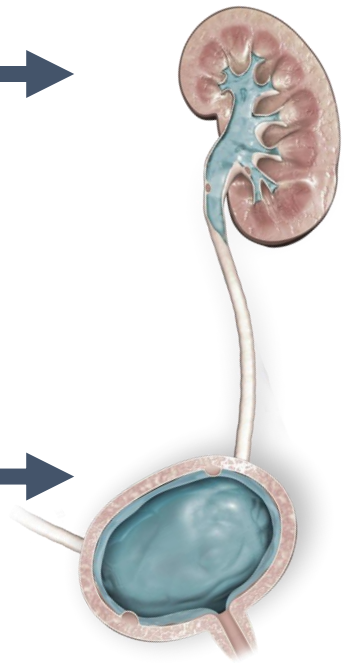
Significant Market Opportunity in Urologic Cancers

- Bladder cancer is one of the top 10 most common cancers in the world
- Lack of FDA-approved drugs for the treatment of urinary tract diseases

UTUC:
Upper Tract Urothelial Carcinoma

US Prevalence
45,000
US Incidence
7,500/yr

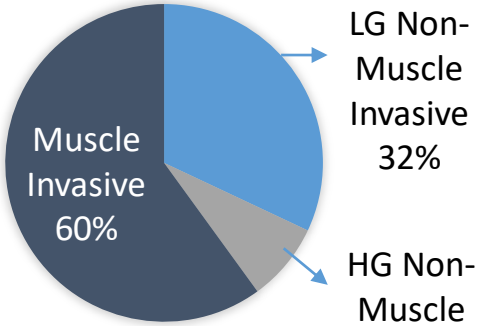
No drugs approved by FDA

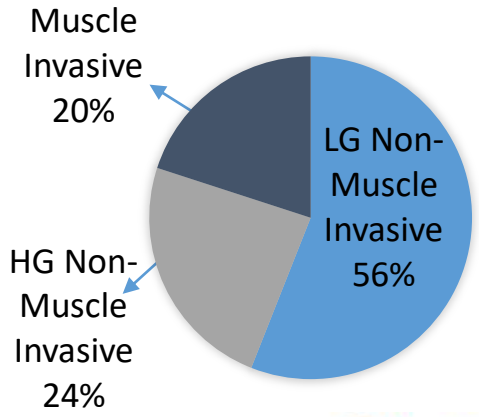


NMIBC:
Non-Muscle Invasive Bladder Cancer

US Prevalence
580,000
US Incidence
80,500/yr

No drugs approved in over 15 years by FDA





UroGen Pharma

Potential to Create New First-Line Treatment Option

Avoiding Complications of Surgery

- Avoids the need for hospitalization, general anesthesia and associated risks of surgery
- TURBT[1] surgery has limitations due to the inability to properly identify, reach and resect all tumors
- In UTUC, inability to resect tumors often results in kidney and upper tract removal

[1] TURBT: Transurethral Resection of Bladder Tumor (current standard of care)

Clinical Development Pipeline

	Product Candidate	Proposed Indication	Phase 1	Phase 2	Phase 3	Next Milestone	Commercial Rights
CHEMOABLATION	**UGN-101 (MitoGel)** *(Orphan)*	Low-Grade Upper Tract Urothelial Carcinoma (UTUC)			Ph 3	• Ph 3 Interim Data • Ph 3 Topline Data = Q3 2018	UroGen
CHEMOABLATION	**UGN-102 (VesiGel)**	Low-Grade Non-Muscle Invasive Bladder Cancer (NMIBC)		Ph 2a		• Submit IND = Q2 2018 • Ph 2b Trial Initiation	UroGen
IMMUNOTHERAPY	**UGN-201 (Vesimune)** *(Orphan)*	Carcinoma in Situ (CIS) Bladder Cancer	Ph 1b			• Ph2 Trial Initiation Combination Therapies	UroGen
NEUROMODULATION	**BotuGel**	Overactive Bladder		Ph 2		• Ph 2 Initiated by Allergan in November 2017	Allergan

Phase 3

UGN-101

(MitoGel)

For Low-Grade UTUC

- Potential to become first drug ever approved as a first-line chemoablation treatment of low-grade UTUC
- FDA Orphan Drug Designation
- FDA Fast Track Designation
- Planned NDA filing in Q1 2019

UGN-101: Proof of Concept in UTUC

Response at PDE[(1)]

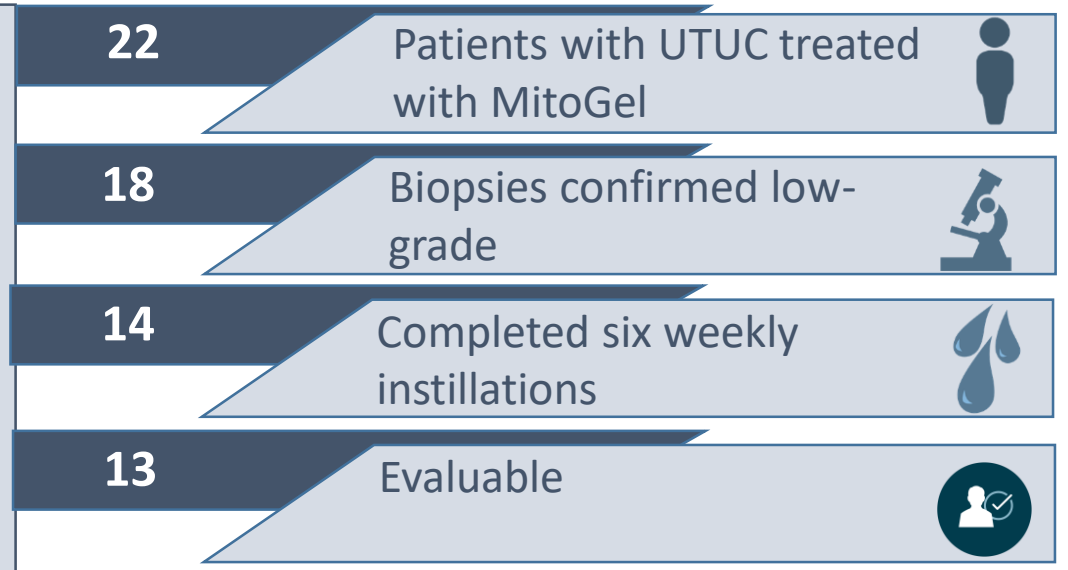
- 44% Complete Response (8 of 18) [(2)]
- 28% Partial Response (5 of 18)

Durability

- 8 original patients achieved CR, 4 remain in CR
- 3 have remained in CR for 18+ months.

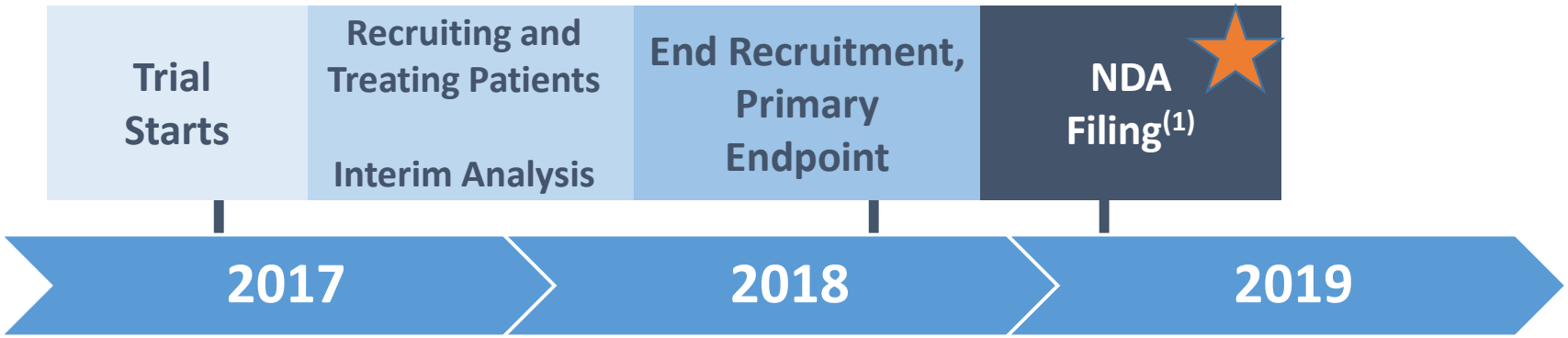
100% response to UGN-101 therapy at PDE time point

- Localized treatment of hard to resect tumors; extensive tumor burden; some with solitary kidney
- Conducted in the United States, Europe and Israel
- Observed to be generally well-tolerated and feasible to administer



[(1)] PDE=Primary Disease Evaluation; [(2)] Intent to Treat Analysis (ITT)

UGN-101: Pivotal Trial Design & Expected Timing



Design:
- Single pivotal, open-label, single-arm, Phase 3 trial

Patient Group:
- Patients with low-grade UTUC

Number of Patients:
- ~70 patients

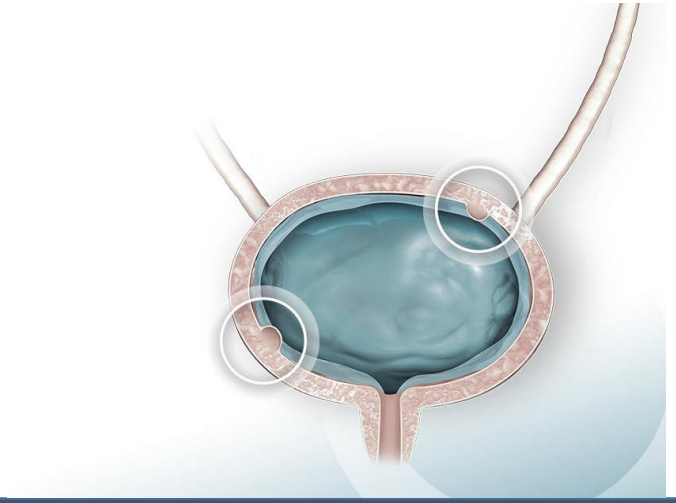
Treatment Regimen:
- Six weekly instillations of UGN-101

Primary Efficacy Endpoint:
- CR(2) at ~four weeks after last instillation
- Patients with CR will be:
  - Followed for durability
  - Treated with UGN-101 monthly for up to 12 months of maintenance therapy

Regulatory Pathway:
- 505(b)(2)

(1) Only if clinical trial is successfully completed; (2) CR: Complete Response

UroGen Pharma

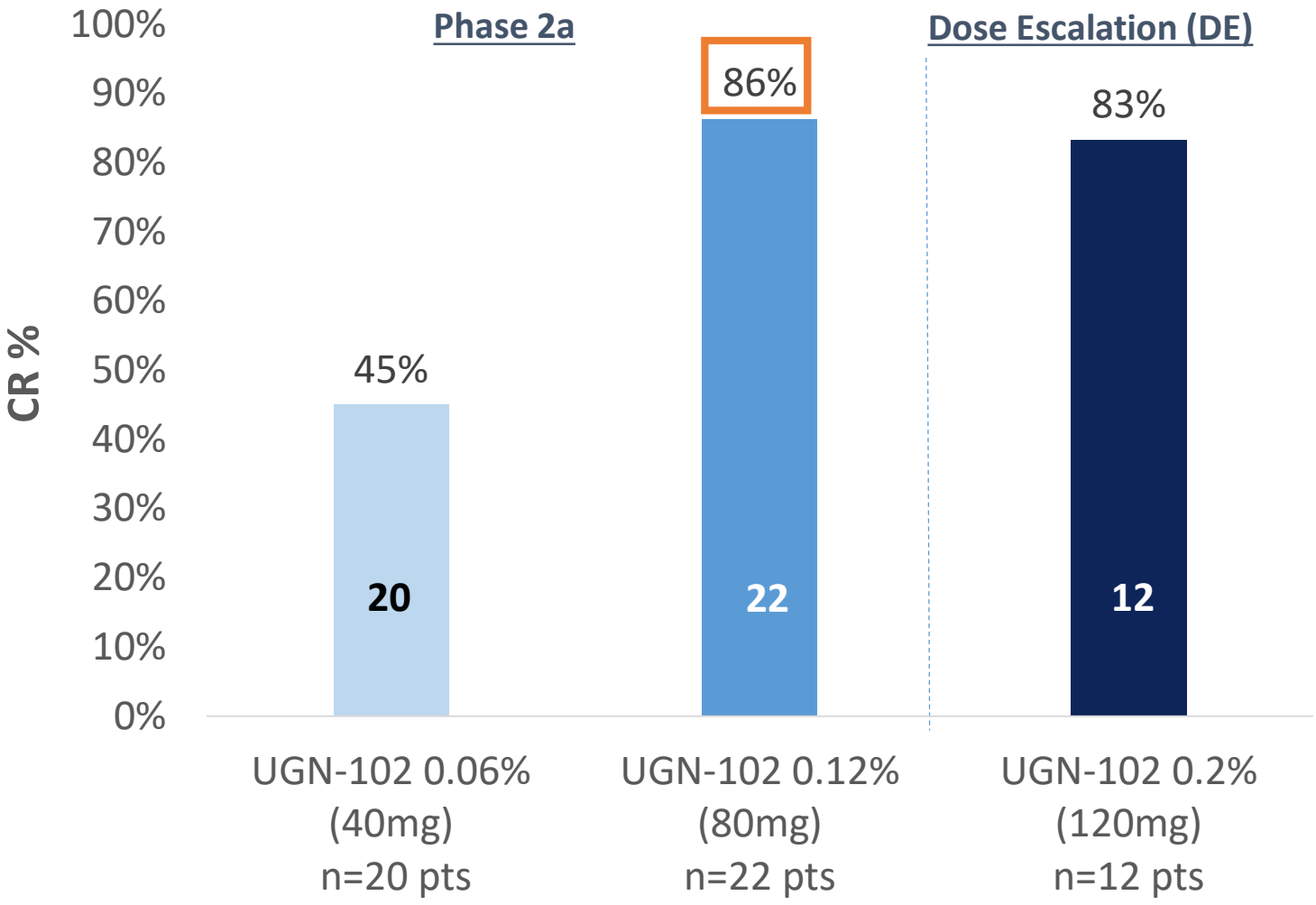


Phase 2a

UGN-102
(VesiGel)
For Low-Grade NMIBC

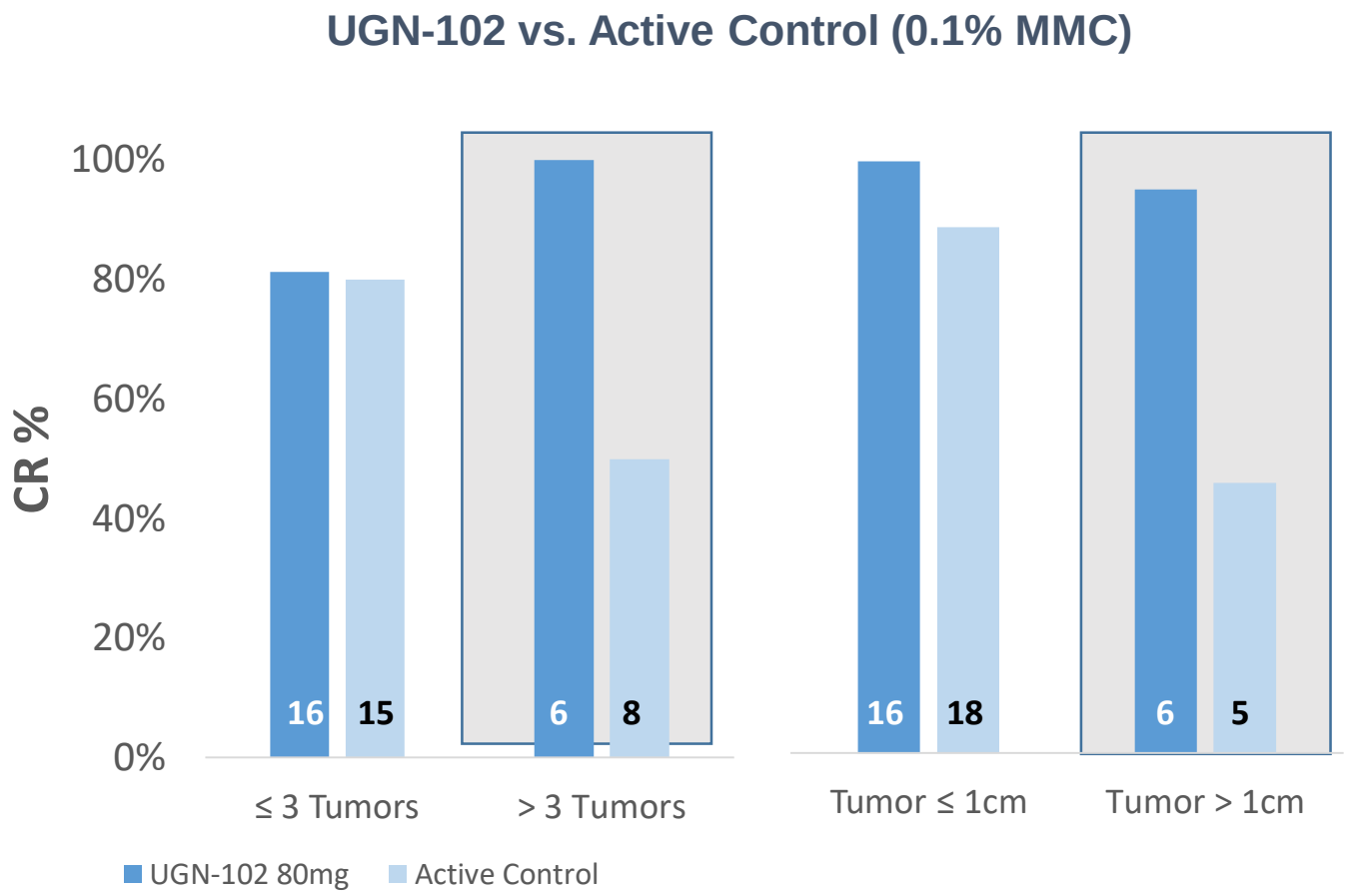
- RTGel / high dose MMC sustained-release formulation
- Potential alternative to TURBT
- Potential first-line chemoablation treatment of low-grade NMIBC

UGN-102: Dose Response Study



- ***86%*** complete response with UGN-102 0.12% (80mg)
- Using higher doses may not increase efficacy

UGN-102: Potential Alternative to TURBT



Eligibility for TURBT:

- Tumor size: > 1cm
- Multifocal: > 3 tumors

Shortcomings of TURBT:

- Nonvisible lesions
- Incomplete resection
- Hospitalization
- Anesthesia

VesiGel vs. Active Control:

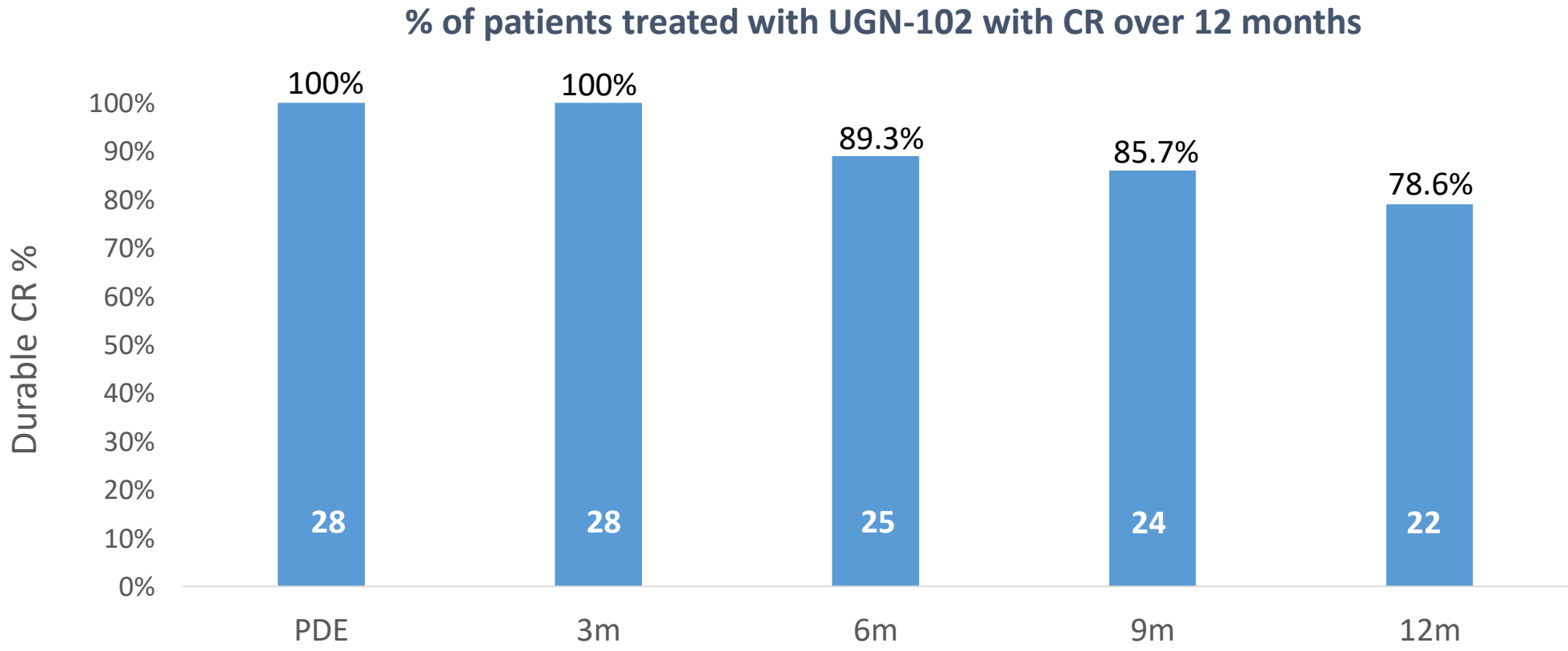
- Higher CR rates in TURBT eligible group

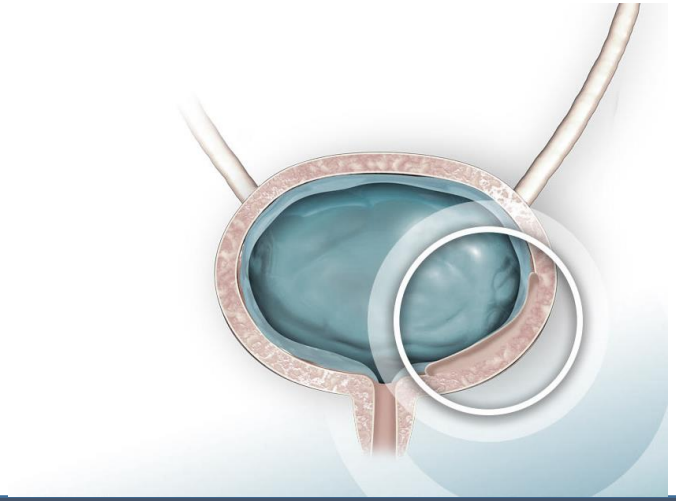
UGN-102 can allow for increased coverage of the bladder tissue designed to overcome shortcomings of TURBT surgery

UroGen Pharma

UGN-102: Durable CRs in Clinical Program

~80% durability at 12 months
No additional treatments were given during this period





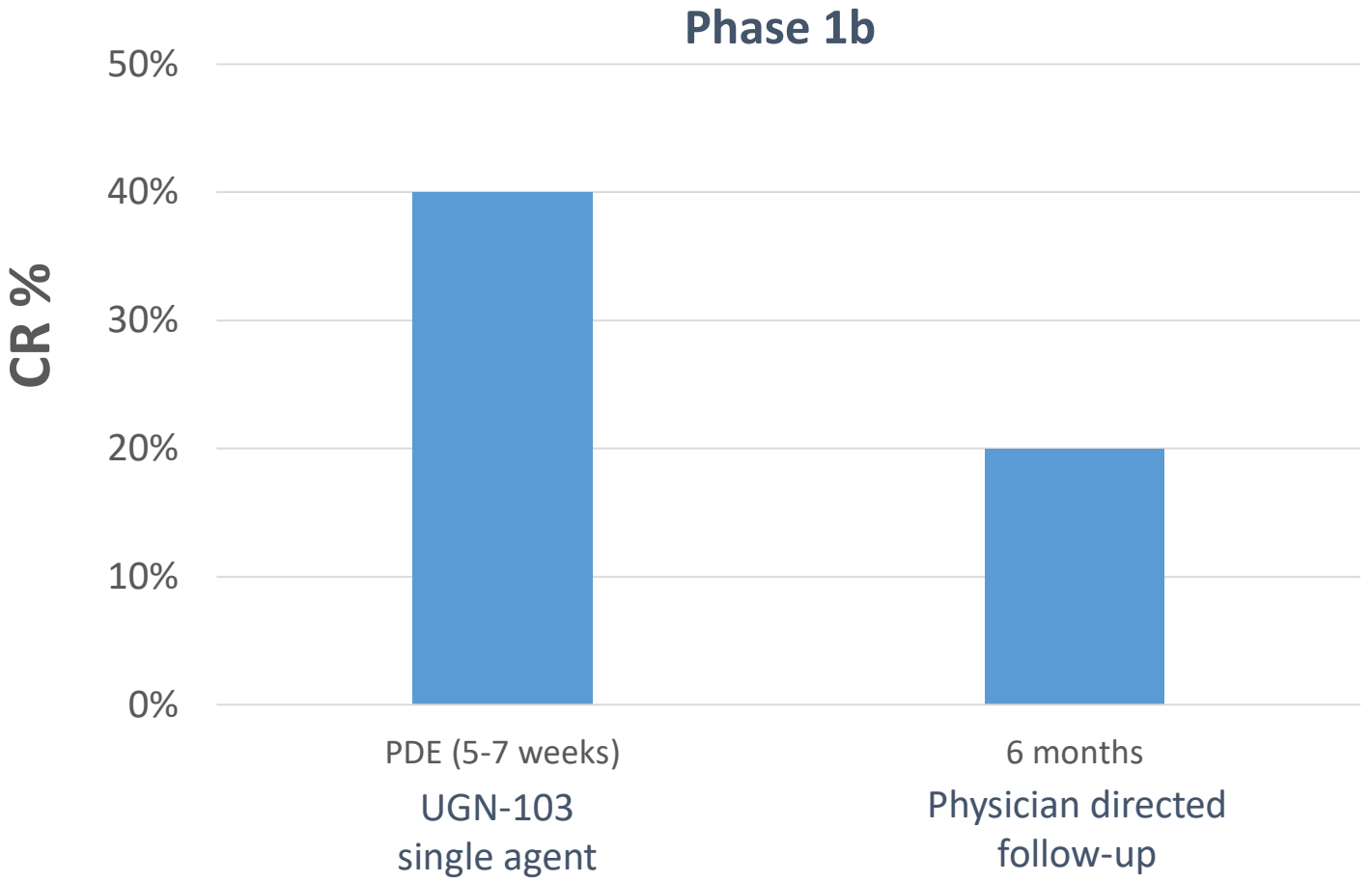
Phase 1b

UGN-201
(Vesimune)
For CIS Bladder Cancer

- Novel Imiquimod formulation for bladder instillation
- Orphan Drug Designation for CIS bladder cancer
- Potential local immunotherapy for the treatment of CIS bladder cancer

CIS = Carcinoma in Situ

UGN-201: Preliminary Proof of Concept Data



Patient Group:
- Patients with NMIBC

Number of Evaluable Patients:
- DE: 23 (not shown)
- Phase 1: 10 (under U.S. IND)

Treatment Regimen:
- Six weekly instillations
- No TURBT to CIS patients

Primary Efficacy Endpoint:
- CR at 5-7 weeks post last instillation

- Novel local immunotherapy drug for high-grade NMIBC
- Potential synergism with immune checkpoint inhibitors

UroGen Pharma

Validating the RTGel Platform Beyond Oncology

BotuGel for Overactive Bladder

- Exclusive license agreement with Allergan
- Potential to evolve from multiple injections of BOTOX into the bladder to a single instillation into the bladder
- Up to $225 million ($25 million already received and $200 million in pending milestones) and tiered royalties on net sales
- Phase 2 trial initiated by Allergan in November 2017

UroGen: Emerging Leader in the Treatment of Urothelial Cancers and Other Urological Indications

Innovative technology platform with potential for use beyond oncology to improve therapeutic profiles of existing drugs in a wide range of body cavities

Potential for first ever FDA drug approval for the treatment of Upper Tract Cancer

Management team with experience in drug development, oncology/urology and business efficiencies

Strong cash position of ~$73.0 million as of December 31, 2017 plus net proceeds of $64 million from follow-on offering in January 2018

UroGen Pharma

Thank you