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June 2019 Regulatory Update

June 10, 2019

NASDAQ SESN

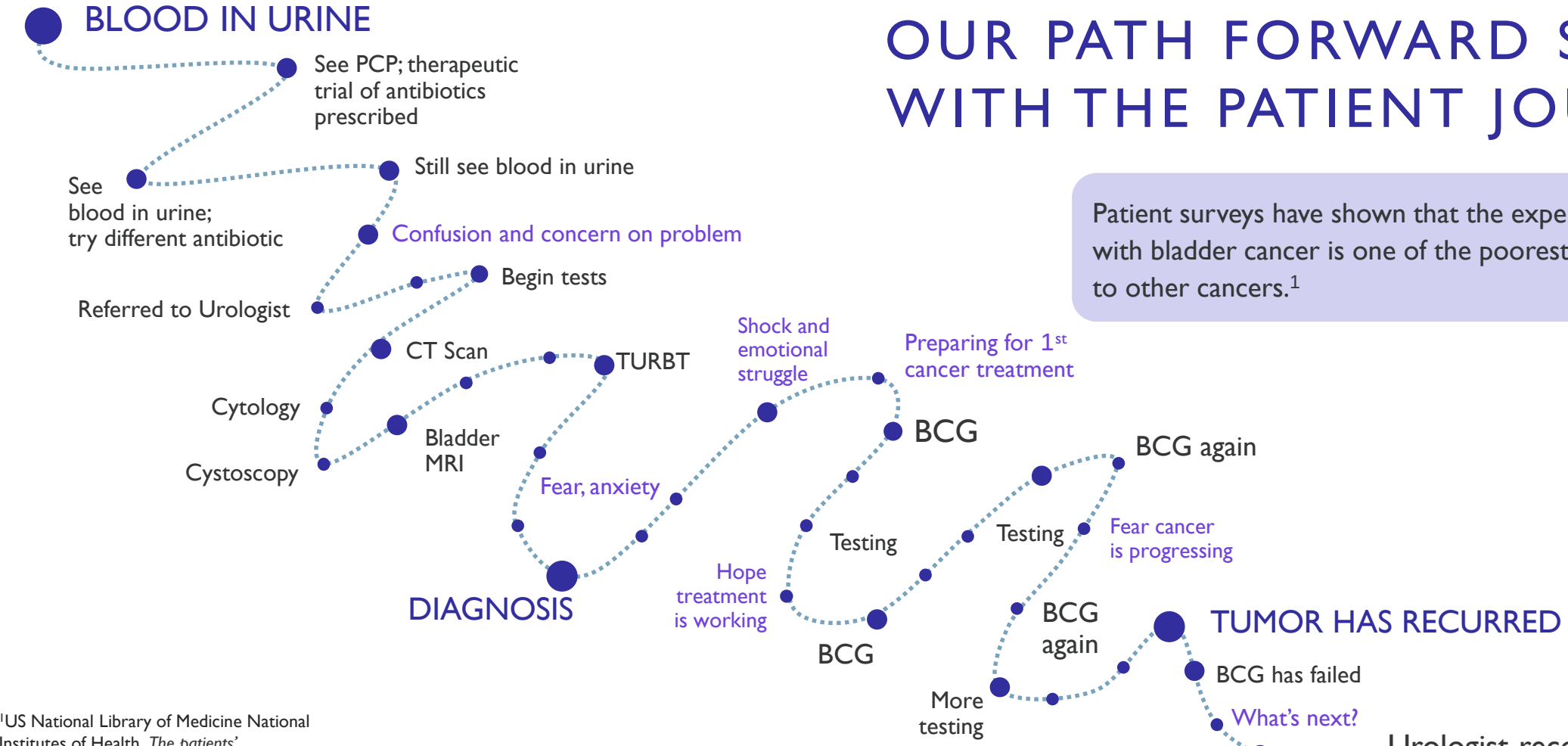
FORWARD-LOOKING STATEMENTS

This presentation contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained in this presentation, including statements regarding our strategy, future operations, clinical development of our protein therapies, timing or probability of regulatory approval, future financial position, future revenues, projected costs, prospects, plans and objectives of management, are forward-looking statements. The words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue," and similar expressions are intended to identify forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, although not all forward-looking statements contain these identifying words.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make as a result of various important factors, including: the uncertainties inherent in the initiation and conduct of clinical trials, the possibility that the available preliminary data of the Phase 3 VISTA Trial are not indicative of final data from all patients in the Phase 3 VISTA Trial and/or that the final data may not be positive with regard to the safety or efficacy of Vicinium®, the possibility that the FDA may require a change in our registration strategy and/or that the safety or efficacy data for Vicinium submitted as part of a BLA may not be considered sufficient by the FDA, our ability to successfully develop our product candidates and complete our planned clinical programs, the potential advantages or favorability of our product candidates, our ability to obtain marketing approvals for our product candidates, expectations regarding our ongoing clinical trials, availability and timing of data from clinical trials, the adequacy of any clinical models, expectations regarding regulatory approvals, our ability to obtain, maintain and protect our intellectual property for our technology and products, other matters that could affect the financial performance of the Company, other matters that could affect the availability or commercial potential of the Company's product candidates, expectations regarding the adequacy of our existing capital resources to fund our operating plan into 2020, and other factors discussed in the "Risk Factors" section of the Company's Annual Report on Form 10-K, and other reports on file with the Securities and Exchange Commission (SEC). The forward-looking statements contained in this presentation are made as of the date hereof, and Sesen Bio assumes no obligation to update any forward-looking statements whether as a result of new information, future events, or otherwise except as required by applicable law.

OUR PATH FORWARD STARTS WITH THE PATIENT JOURNEY

Patient surveys have shown that the experience of those with bladder cancer is one of the poorest when compared to other cancers.[1]



"Radical cystectomy is associated with significant morbidity and mortality and a negative impact on quality of life, and many patients actually refuse or are ineligible for cystectomy."[2]

[1]US National Library of Medicine National Institutes of Health. *The patients' experience of a bladder cancer diagnosis: a systematic review of the qualitative evidence.* 2017.
[2]Ronald de Wit, MD, PhD, group leader of the Experimental Systematic Therapy of Urogenital Cancers program at Erasmus MC Cancer Institute, Rotterdam, The Netherlands, ESMO 2018.

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2019 Outlook

Cash runway into 2020, with no outstanding debt

	March 31, 2019	March 31, 2018
Cash and Cash Equivalents	$42.4M	$19.7M

- As of 6/7/2019: $3.4M in additional cash proceeds from shares issued pursuant to warrant exercises*

Recent milestones with FDA

Type of FDA Meeting	Completed Meeting Date
Type C CMC Meeting	May 20, 2019
Type B Pre-BLA Meeting	June 6, 2019

*As of March 31, 2019, the Company had outstanding warrants to purchase 9.3M shares of common stock at a weighted average exercise price of $1.17 per share. Subsequent to March 31, 2019 through June 7, 2019, 3.3M shares of common stock were issued upon warrant exercises, which resulted in aggregate net proceeds to the Company of $3.4M.

2019 Regulatory Update for Vicinium for NMIBC

May 20th Type C CMC Meeting: FDA Accepts Analytical Comparability Plan to Support the BLA and Commercialization of Vicinium for NMIBC

- Reached alignment with FDA on primary objective of meeting: acceptance of analytical comparability plan for commercial supply of Vicinium to support the significant global demand
  - No additional clinical trials deemed necessary at this time, subject to final comparability data to be included in the BLA submission

June 6th Type B Pre-BLA Meeting: FDA Recommends Accelerated Approval Pathway and Rolling Review

- Reached alignment with FDA on key objectives for the approval path of Vicinium including:
  - Review under Accelerated Approval Pathway
  - No additional clinical trials necessary at this time for purposes of a BLA submission
  - Nonclinical data, clinical pharmacology data, and the safety database are sufficient to support a BLA submission
  - Rolling Review of submission along with plans to initiate submission of the BLA in the fourth quarter of 2019

Upcoming Milestones

- Two additional meetings with the FDA planned for 2H 2019:
  - Type B CMC meeting to discuss the submission strategy of the CMC module
  - Type C meeting to discuss the details of a post-marketing confirmatory trial in support of the Accelerated Approval Pathway for Vicinium
- Initiation of BLA submission in the fourth quarter of 2019
- Expected meeting and review with the FDA Oncologic Drug Advisory Committee post BLA submission
- Potential OUS partnerships as early as 1H 2020

Our long-term relationship with the agency has allowed us to shape our nonclinical and clinical program in alignment with FDA guidance

2018 FDA Guidance	Vicinium Clinical Program
• Conduct nonclinical studies to assess toxicity in animal models	✓
• Conduct nonclinical studies to demonstrate anti-tumor activity	✓
• Conduct nonclinical studies to determine optimal dose and schedule	✓
• Examine anti-tumor activity and optimal dose schedule in early phase clinical trial	✓
• Papillary cohort endpoint of recurrence-free survival (time to event endpoint)	✓
• CIS studied in single-arm trial with CRR & DoR as primary endpoints	✓
• Papillary cohort not in primary efficacy endpoint	✓
• Prefer intravesical vs. systemic	✓
• Specifically define trial entry criteria	✓
• Definition of BCG-unresponsive disease	✓
• 2004 WHO classification for tumor grading	✓
• Central pathology review of biopsy tissue and urine cytology	✓
• Collect data on patients' previous anti-cancer therapies	✓
• Enroll patients who reflect clinically relevant patient population	✓
• Optimize risk-benefit balance with dose selection	✓
• Definition of CRR	✓
• Collect time to cystectomy data	✓
• Lower bound of 95% confidence interval rules out clinically unimportant CRR	✓
• Nonclinical studies to determine need for evaluation of systemic toxicity	✓
• Consistent efficacy and safety data across Phase I, II and III trials	✓

Source: FDA Guidance: BCG-Unresponsive Non-muscle Invasive Bladder Cancer: Developing Drugs and Biologics for Treatment Guidance for Industry, February 2018
CRR is Complete Response Rate, DoR is Duration of Response, BCG is bacillus Calmette-Guérin, WHO is World Health Organization

We believe the totality of Phase III data suggest a strong benefit-risk profile

PIII
All Cohorts

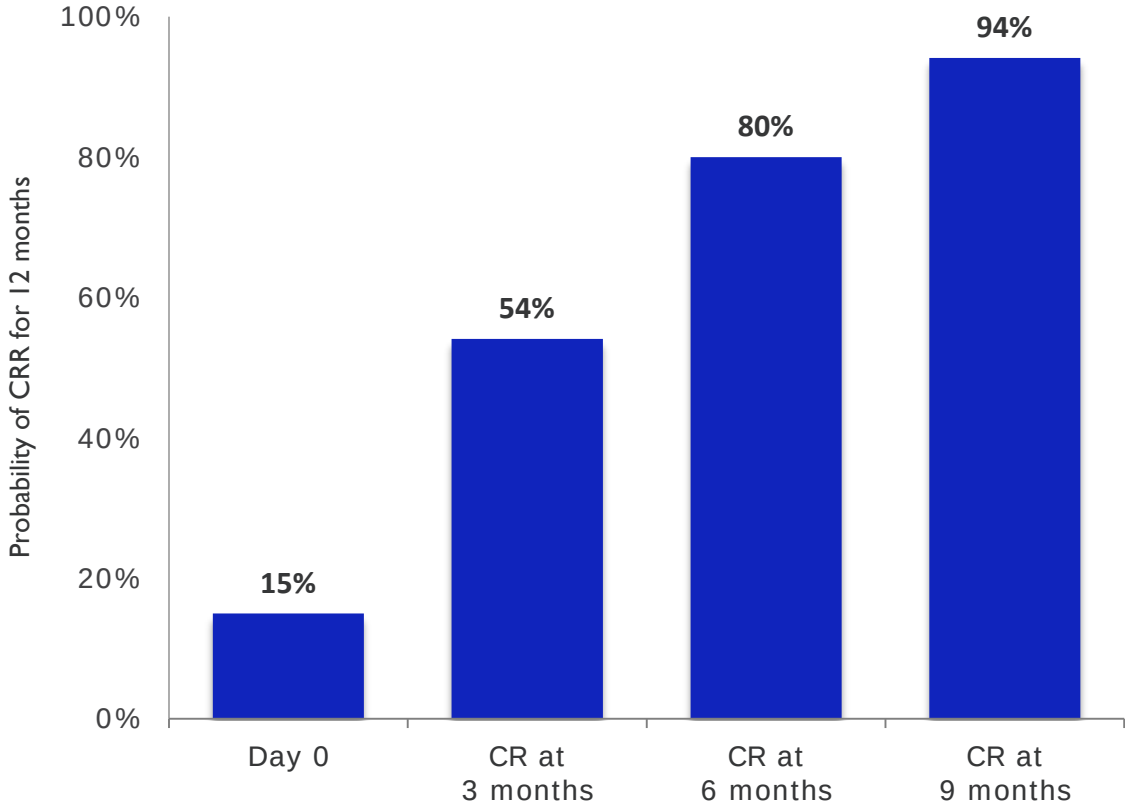
Endpoint	How Endpoint is Measured	Preliminary Results
Complete Response Rate (CRR) Primary Endpoint CIS patients	Defined as the proportion of patients who show no evidence of high-risk disease, or disease progression (e.g., T2 or more advanced disease).	• 39% CRR at 3 months • Lower bound of 95% CI rules out clinically unmeaningful CRR • Higher complete response in patients receiving less BCG
Duration of Response (DoR) Primary Endpoint CIS patients	Defined as the time of complete response to treatment failure.	• ~50% duration of 9 months or greater (12 months of therapy) • ~40% duration of 21 months or greater (24 months of therapy) • The longer the duration, the higher the probability of remaining disease-free
Time to Disease Recurrence Secondary Endpoint Papillary patients	Defined as the time from the date of first dose of study treatment to treatment failure.	• Median time to recurrence is 402 days • ~50% probability of remaining recurrence-free for 12 months • Nearly 40% probability of remaining recurrence-free for 24 months
Time to Cystectomy (TtC) Secondary Endpoint All Cohorts	Defined as the time from the date of first dose of study treatment to surgical bladder removal.	• Average patient is cystectomy-free for 854 days • >75% of patients cystectomy-free at 2.5 years • Responders ~15x more likely to be cystectomy-free
Progression-Free Survival (PFS) Secondary Endpoint All Cohorts	Defined as the time from the date of first dose of study treatment to disease progression (e.g. T2 or more advanced disease) or death as a first event.	• ~95% of patients are progression-free at 12 months • >85% of patients progression-free at 24 months • Median PFS has not been reached
Event-Free Survival (EFS) Secondary Endpoint All Cohorts	Defined as the time from the date of first dose of study treatment to treatment failure or death as a first event.	• 30% of patients are event-free at 12 months • 22% of patients remain event-free at 18 months • 20% of patients remain event-free at 24 months
Overall Survival (OS) Secondary Endpoint All Cohorts	Defined as the time from the date of first dose of study treatment to death from any cause.	• >99% of patients have overall survival at 12 months • >90% of patients have overall survival >2.5 years • Median OS has not been reached
Safety Secondary Endpoint All Cohorts	Full review of all safety data from Phase III	• 2% treatment-related SAEs • 4% treatment-related Grade 3-5 • Increased dosing in Phase III did not increase severity of AEs
Tolerability Secondary Endpoint All Cohorts	Full review of all tolerability data from Phase III	• AEs generally low grade • Low rate of discontinuations for AEs • No age-related increase in AEs

Note: Data reflected are as of March 1, 2019 data cutoff

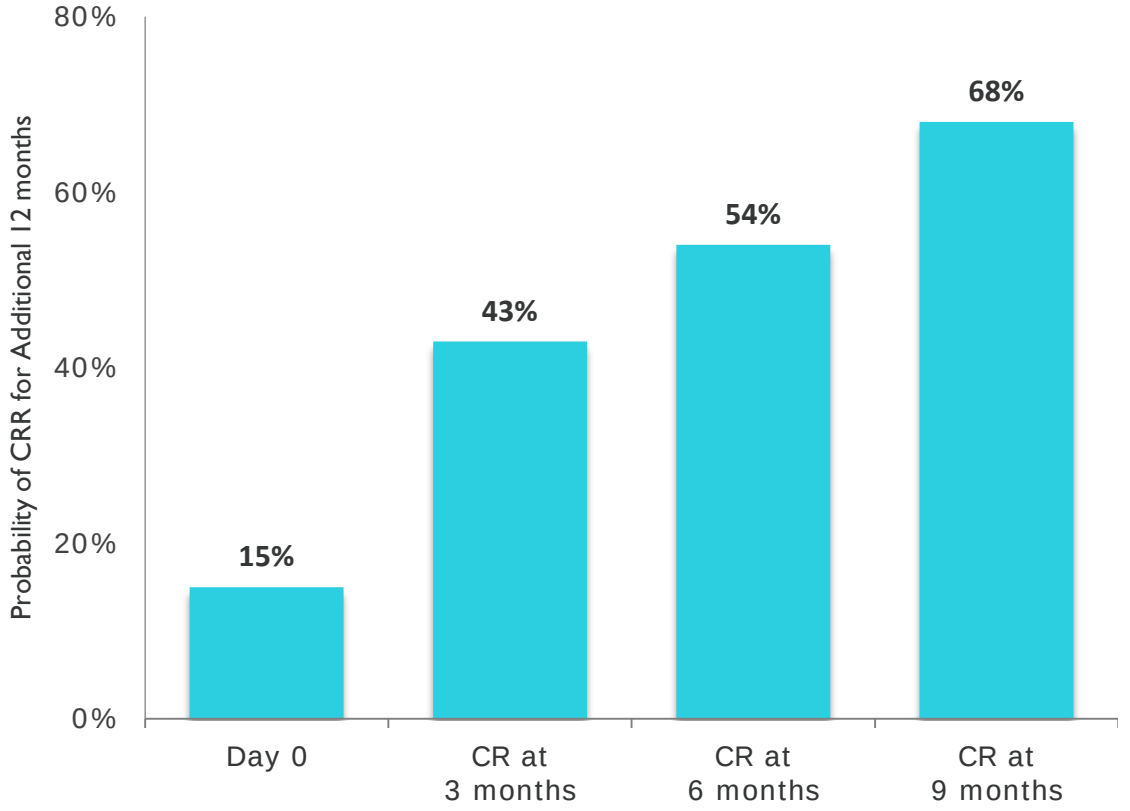
Duration of Response: For patients treated with Vicinium for three months, at each time point a CR is confirmed, the probability of maintaining a CR increases

PIII CIS Patients

Probability of Maintaining Complete Response for at Least One Year After Start of Therapy



Probability of Maintaining Complete Response for at Least One Additional Year*



*As estimated by Kaplan-Meier (starting at time of designated CR)
Note: Data reflected are as of March 1, 2019 data cutoff

Complete and Partial Response: In our Phase II clinical trial, 83% of patients had a complete or partial response

PII
CIS Patients

Start of Treatment with Vicinium

3-Month Response

- ~40% of patients had a complete response
- ~43% of patients had a partial response
- ~17% of patients have no response

*Note: Data referenced are from Phase II clinical trial, n=45 (~40% of patient had a complete response at 3 months; 60% of patients did not have a complete response and, of those, 71% of patients had a partial response). Partial response as measured by bladder mapping, is defined by non-complete response patients who had either a reduction in tumor size or did not experience an increase in bladder area affected. Bladder mapping was not done as part of the Phase III trial, therefore partial response data are not available.
Note: Data reflected are as of March 1, 2019 data cutoff

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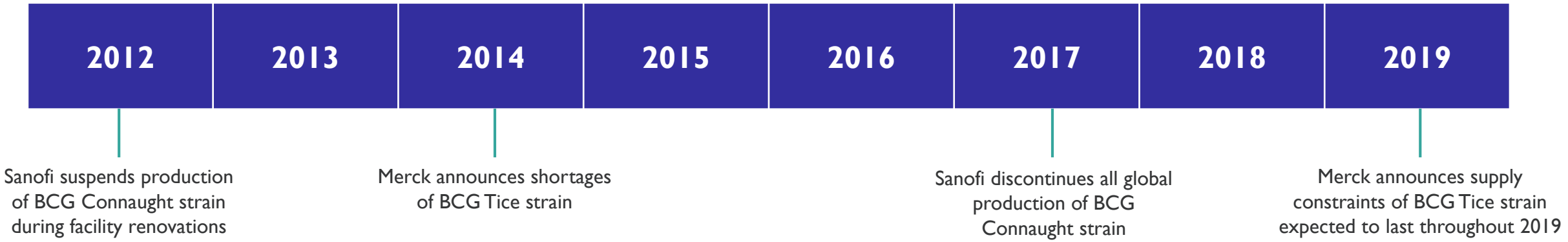
Latest global BCG shortage expected to last at least through remainder of 2019



BCG Shortage Current Events:

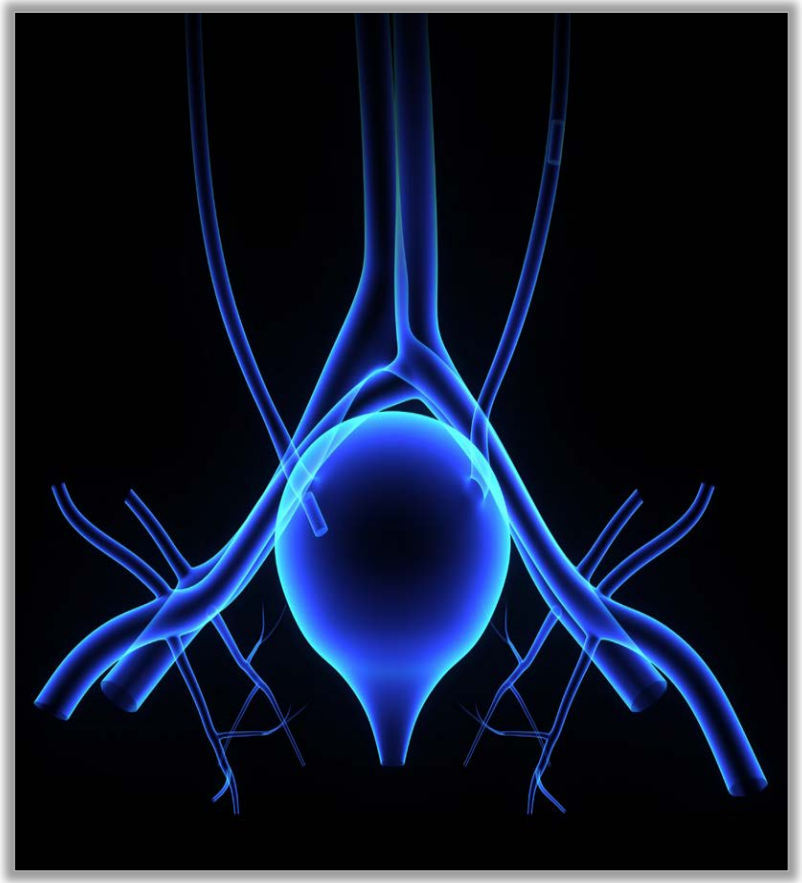
- Since 2012, Merck has been the sole supplier of BCG in the US and the majority of countries worldwide.
- Merck has changed its TICE BCG distribution strategy, now allocating exclusively to distributors and wholesalers based on product supply and historical purchasing patterns.
- Merck anticipates this global supply constraint to continue throughout 2019.
- Many prominent groups such as AUA, BCAN, LUGPA, etc. are advocating with the FDA and payers to find solutions.
- The AUA has issued updated guidance for high-risk NMIBC to maximize patient care, including decreased dosing, delayed maintenance therapy, first line use of alternative therapies, and earlier surgical intervention via radical cystectomy.

Sources and Additional Information:
Wall Street Journal. *Sanofi to Stop Production of Bladder Cancer Drug BCG*. Peter Loftus. 2016.
https://www.auanet.org/practice-resources/bcg-info/bcg-shortage-notice
https://www.bcan.org/2019-bcg-shortage-bladder-cancer/

We believe our Phase III data suggests Vicinium may be cystectomy-sparing by significantly delaying or avoiding cystectomy for patients

Your Bladder: A Hero Organ

- Self-controlled storage organ in the body
- Holds urine for release so the body is not exposed to harmful toxins and waste
- Part of the urinary system; partners with lungs, skin, and intestines to keep chemicals and water in the body balanced and healthy
- Integrated with male and female reproductive systems



Radical Cystectomy: Life-Altering Surgery

- Often a 10 hour or longer surgery
- In women, removal of the entire bladder includes removal of the uterus, fallopian tubes, ovaries and cervix, part of the vaginal wall, and surrounding tissue
- In men, removal of the entire bladder includes removal of the prostate, seminal vesicles, and surrounding tissue
- Radical cystectomy requires life-long catheterization and urinary diversion

FDA Guidance: The goal of therapy in patients with BCG-unresponsive NMIBC is to avoid cystectomy.

Sources and Additional Information:
Bladder Cancer Advocacy Network (BCAN). *Bladder Removal Surgery.* May 2017.

June 2019 Company Highlights

1. Positive interactions with FDA on May 20th and June 6th resulting in greater confidence in our regulatory and commercial pathway

2. Long-term relationship with the FDA enables high level of alignment with regulatory guidelines

3. Vicinium appears to demonstrates compelling benefit-risk profile with the potential to be BCG and cystectomy-sparing

Additional Information

ADDENDUM TABLE OF CONTENTS

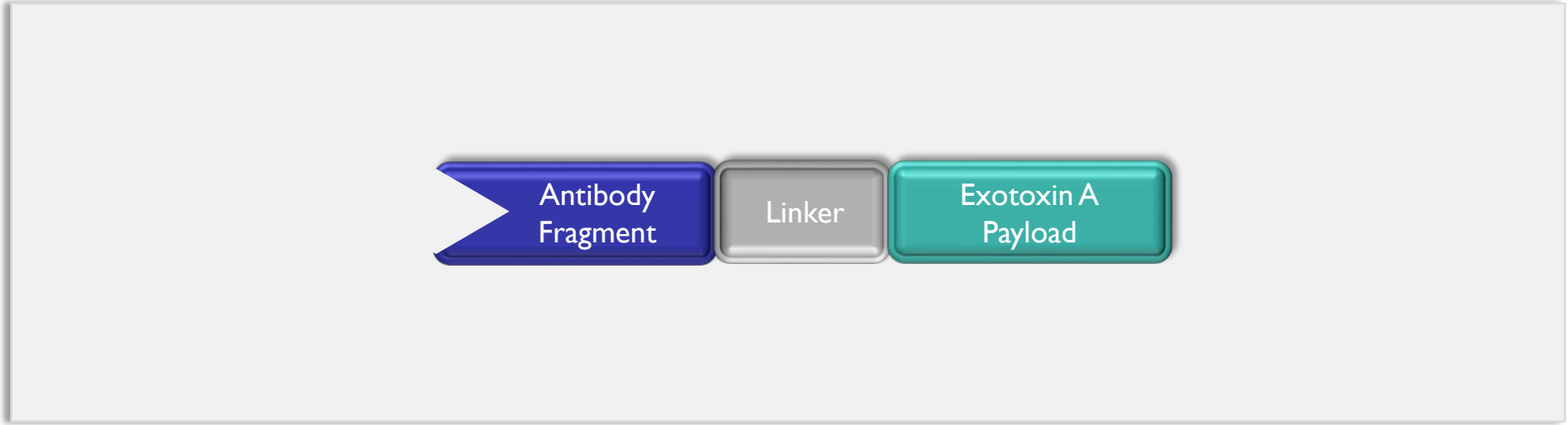
1. Updated Phase III data further demonstrate a compelling benefit-risk profile*

2. Strong regulatory and commercial rationale

3. Manufacturing process expected to be reliable and inexpensive

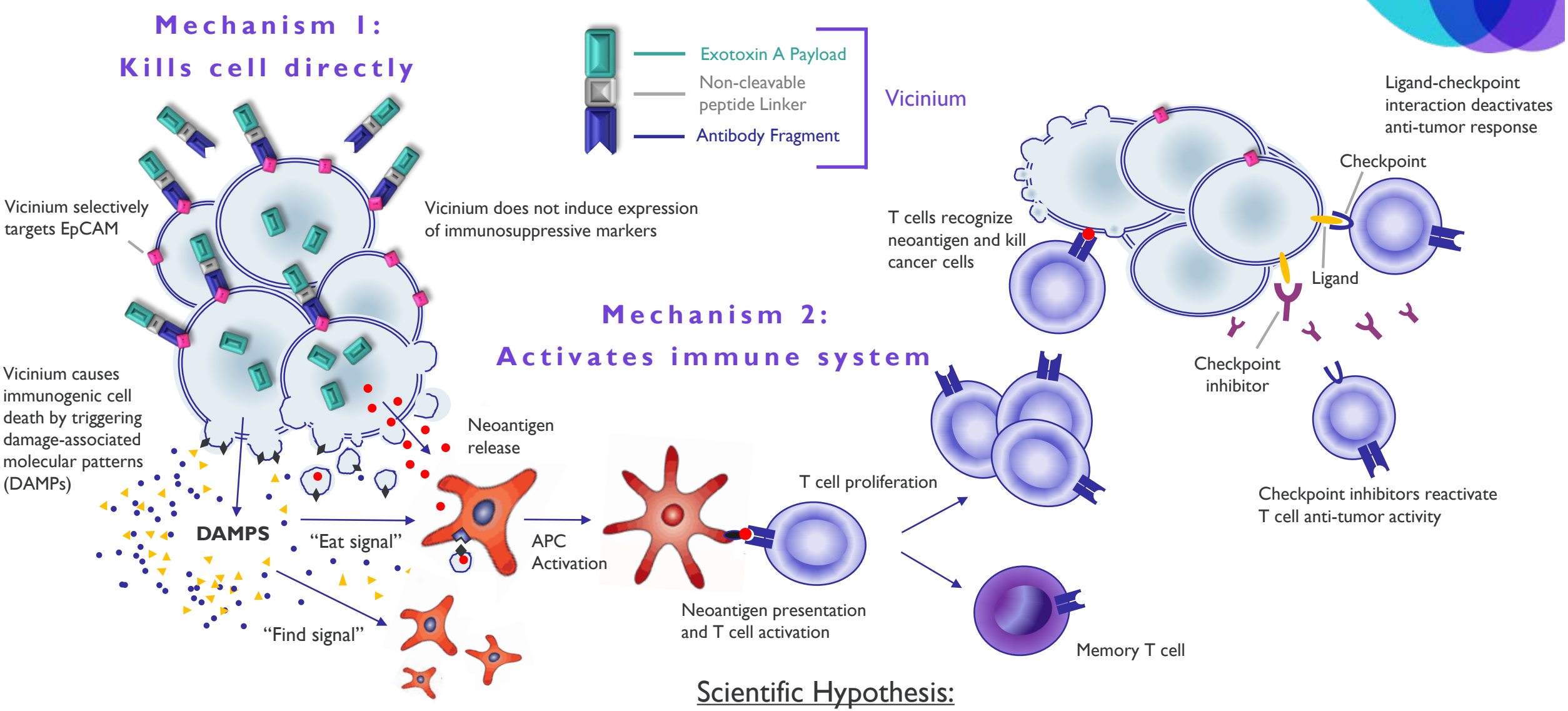
*Updated Phase III data are as of the March 1, 2019 data cut

Vicinium is a small, single protein strand that selectively targets cancer cells



- Antibody fragment (scFv) targeting EpCAM linked to a cytotoxic payload (Pseudomonas exotoxin A) to form a single protein
- EpCAM over-expressed in cancer cells
- Highly selective targeting of cancer cells while generally avoiding normal cells
- Inhibits protein synthesis, and kills both rapidly proliferating and slow-growing cancer cells
- Effective against multi-drug resistant cancer cells
- High potency relative to other available agents

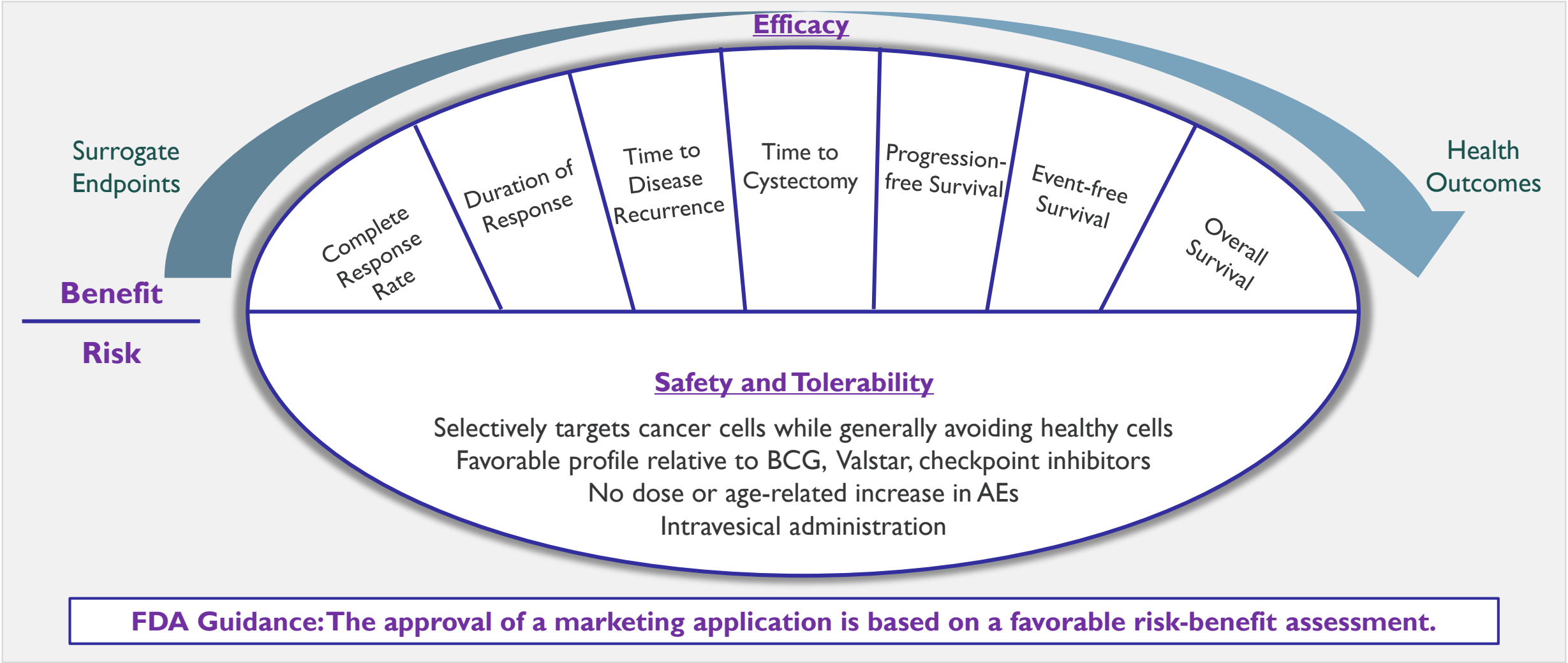
Vicinium: Dual Mechanism of Action



Scientific Hypothesis:

Induction of immunogenic cell death by Vicinium may facilitate a T-cell mediated anti-tumor response that could synergize with the ability of checkpoint inhibitors to relieve immunosuppression

Vicinium demonstrates a strong benefit-risk profile in our Phase III Trial

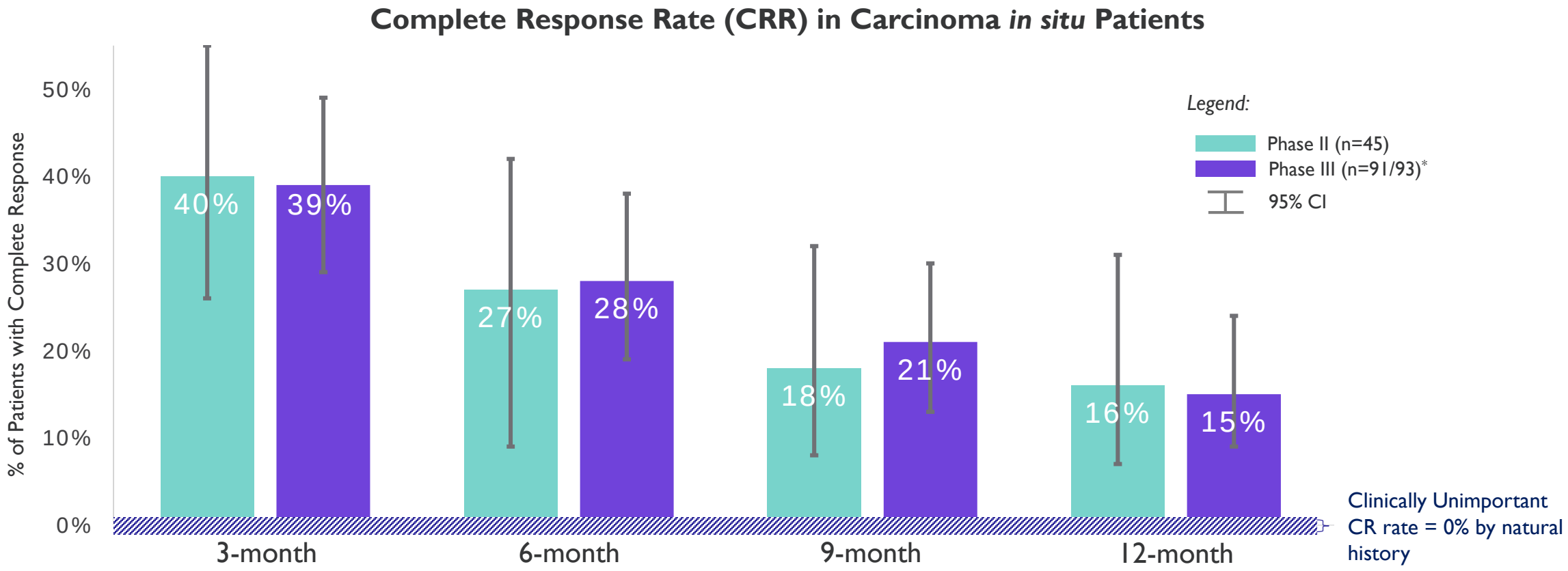


FDA Guidance: The approval of a marketing application is based on a favorable risk-benefit assessment.

Phase III clinical trial is an open-label, multicenter, single-arm Phase III registration trial for the treatment of high-risk NMIBC patients who are designated to be BCG-unresponsive after adequate treatment with BCG. Adequate BCG is defined as at least two courses of BCG with at least five doses in the first course and two in the second. Preliminary data as of March 1, 2019.

Complete Response Rate: Our Phase II and Phase III clinical trials are highly consistent for Complete Response Rate

PII & PIII CIS Patients

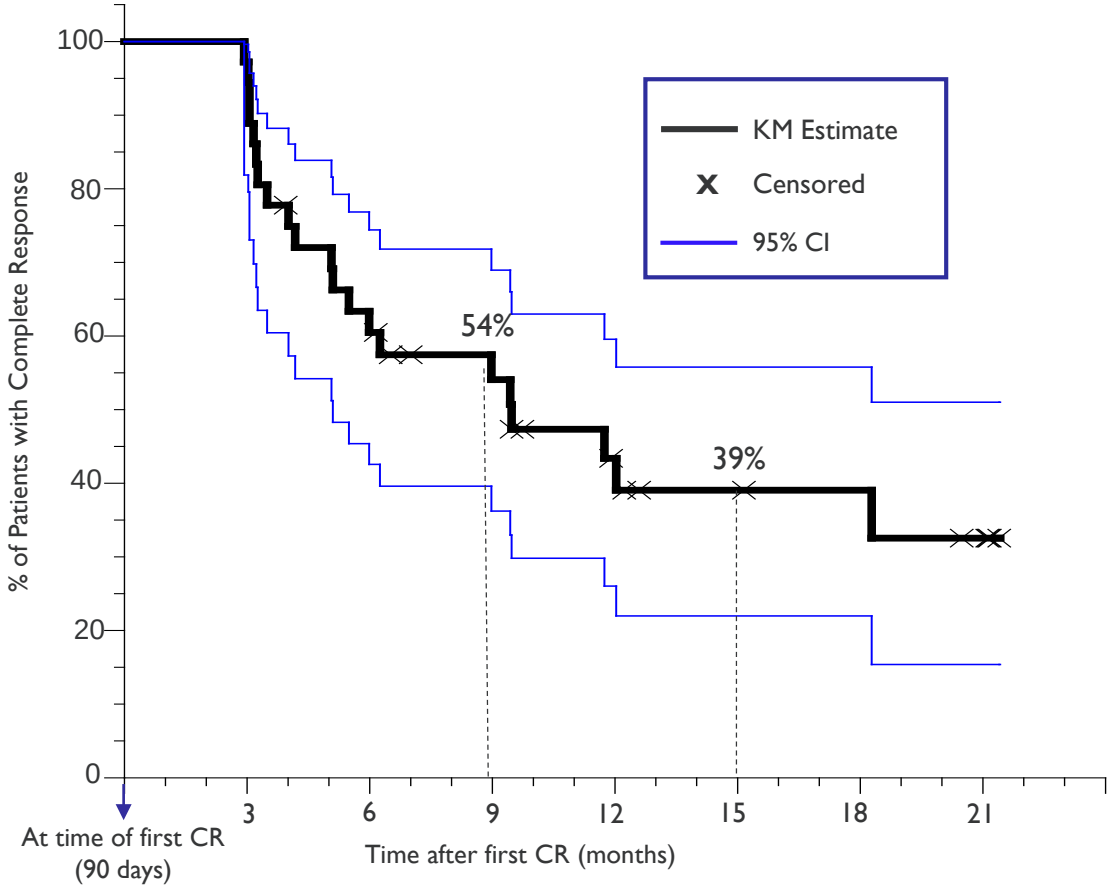


*Note: Phase III data reflect an ad hoc analysis of pooled results of patients in cohorts 1&2 with Carcinoma in situ (with or without papillary disease) that were determined to be refractory or recurred less than 11 months after their last course of adequate BCG. As of the March 1, 2019 data cut, 91 of 93 patients have completed the 12-month diagnostic test.
For cohort-specific complete response rates, including confidence intervals, refer to slide 27.

Duration of Response: 54% of CIS patients who were complete responders at 3 months remained disease-free for a total of 12 months after starting treatment

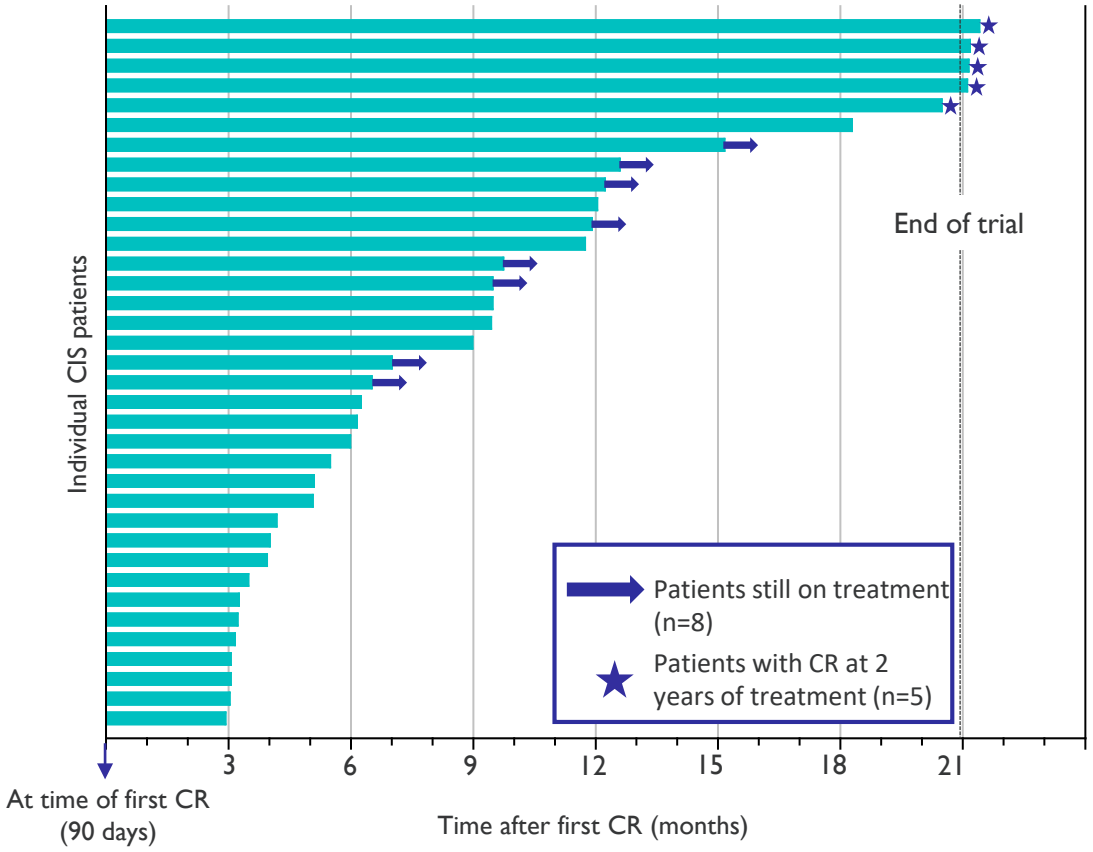
PIII CIS Patients

Median Duration of Response is 288 days (95% CI, 155-NE* days) (9.5 months)**



KM Evaluable Patients:	36	35	21	16	10	7	6	4

Each time point a CR is confirmed, the probability of maintaining a CR increases



Duration of response is defined as the time of complete response to treatment failure.
*Not Estimable, the upper bound for the 95% confidence interval has not reached the median.
**Note: Data reflect an ad hoc analysis of pooled results of patients in cohorts 1&2. Median duration of response for the primary endpoint, Cohort 1 (n=86) is 287 days (95% CI=127-NE), and duration of response for Cohort 2 (n=7) is 288 days (95% CI=167-NE), based on the Kaplan-Meier method.

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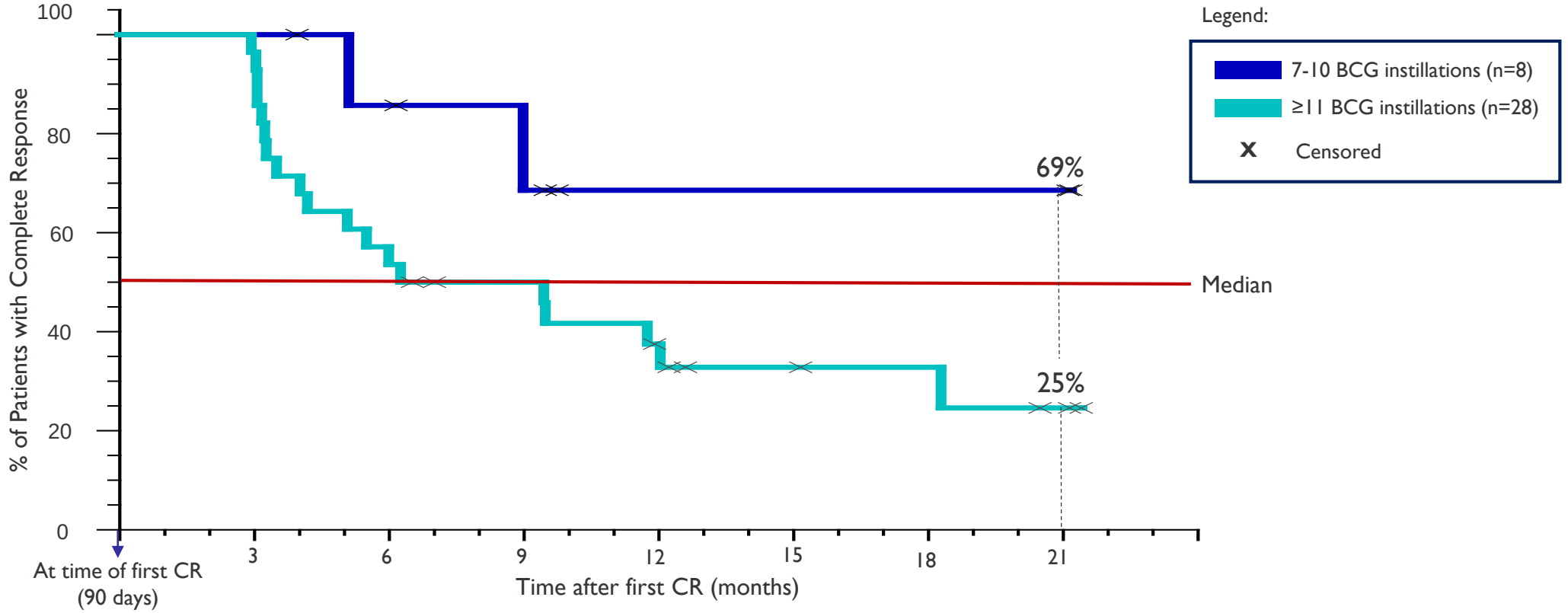
Duration of Response: Vicinium is generally more efficacious in CIS patients treated with less BCG

PIII
CIS Patients

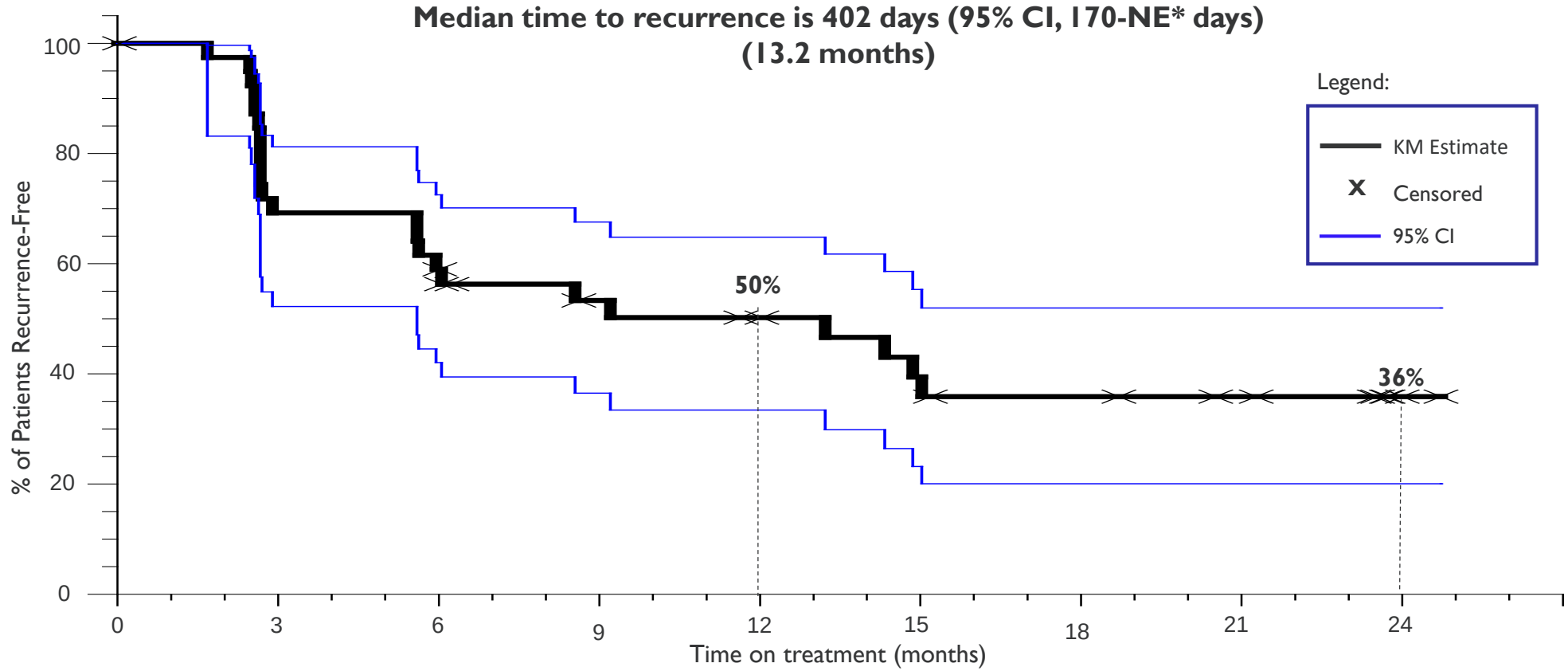


KM Evaluable Patients 7-10 BCG instillations	8	8	6	4	2	2	2	2
KM Evaluable Patients ≥11 BCG instillations:	28	27	15	12	8	5	4	2

Note: Data reflected consists of Cohorts 1&2 patients (n=93)
*Not Estimable, the upper bound for the 95% confidence interval has not reached the median.

Time to Disease Recurrence: For high-risk papillary patients who were treated with Vicinium, 50% are disease-free at 1 year

PIII Papillary Patients



KM Evaluable Patients:	40	34	23	17	14	11	9	4	2

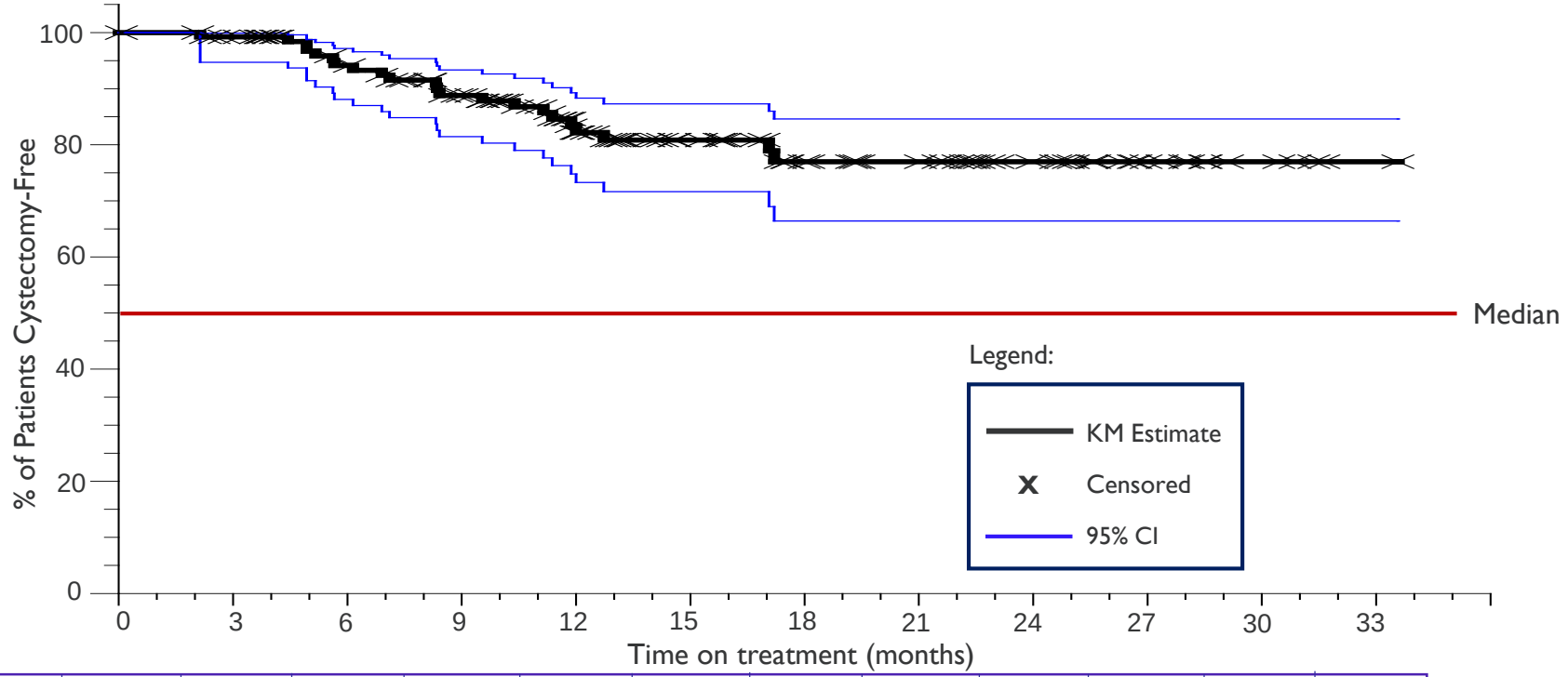
FDA Guidance: Sponsors can include patients with completely resected lesions and no evidence of CIS in these single-arm trials but should not include them in the evaluation of the primary efficacy endpoint.

Time to disease recurrence: defined as the time from the date of the first dose of study treatment to treatment failure.
*Not Estimable, the upper bound for the 95% confidence interval has not reached the median.
Note: Data reflect results of patients in cohort 3 (n = 40) with high-grade Ta or T1 tumors (without Carcinoma *in situ*) that recurred within 6 months of adequate BCG.

Time to Cystectomy: The average patient remains cystectomy-free for 854 days (~28 months) after treatment with Vicinium

PIII
All Cohorts

Responders are ~15 times more likely than non-responders to remain cystectomy-free at 2.5 years



KM Evaluable Patients:	133	127	110	95	66	48	36	32	20	11	5	1

FDA Guidance: The goal of therapy in patients with BCG-unresponsive NMIBC is to avoid cystectomy.

Time to cystectomy: defined as the time from the date of first dose of study treatment to surgical bladder removal. Data reflected consist of patients from all cohorts 1, 2 & 3 (n=133).
Note: Average time to cystectomy from transurethral resection of bladder tumor (TURBT) for NMIBC patients with high-risk papillary disease in Europe is ~105 days (National Institute of Health, *Timing of radical cystectomy in Central Europe - multicenter study on factors influencing the time from diagnosis to radical treatment of bladder cancer patients*, Poletajew S, et al., 2015.)
Additional FDA guidance states that although delay in radical cystectomy is considered a direct patient benefit, the variations in patient and health care provider preferences can confound the interpretation of this endpoint in randomized trials and particularly in single-arm trials. Nevertheless, sponsors should collect these data, which may provide supportive evidence of effectiveness.

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Key Survival Endpoints: Early survival data is encouraging regarding health outcomes for patients treated with Vicinium

PIII
All Cohorts

Progression-Free Survival		
Time Point	Evaluable Patients	Progression-free Survival (95% CI)
6-months	50	99% (97%-100%)
12-months	21	96% (89%-100%)
18-months	9	88% (71%-100%)
24-months	4	88% (71%-100%)
Event-Free Survival		
Time Point	Evaluable Patients	Event-free Survival (95% CI)
6-months	128	41% (32%-49%)
12-months	119	30% (22%-38%)
18-months	111	22% (14%-29%)
24-months	99	20% (12%-28%)
30-months	97	20% (12%-28%)
Overall Survival		
Time Point	Evaluable Patients	Overall Survival (95% CI)
6-months	116	99% (98%-100%)
12-months	85	99% (98%-100%)
18-months	52	96% (92%-100%)
24-months	29	96% (92%-100%)
30-months	14	91% (81%-100%)

Progression-free survival: defined as the time from the date of first dose of study treatment to disease progression (i.e. T2 or more advanced disease) or death as a first event.
Event-free survival: defined as the time from the date of first dose of study treatment to treatment failure or death as a first event.
Overall survival: defined as the time from the date of first dose of study treatment to death from any cause.
Note: Data reflected consist of patients from all cohorts 1, 2 & 3 (n=133).

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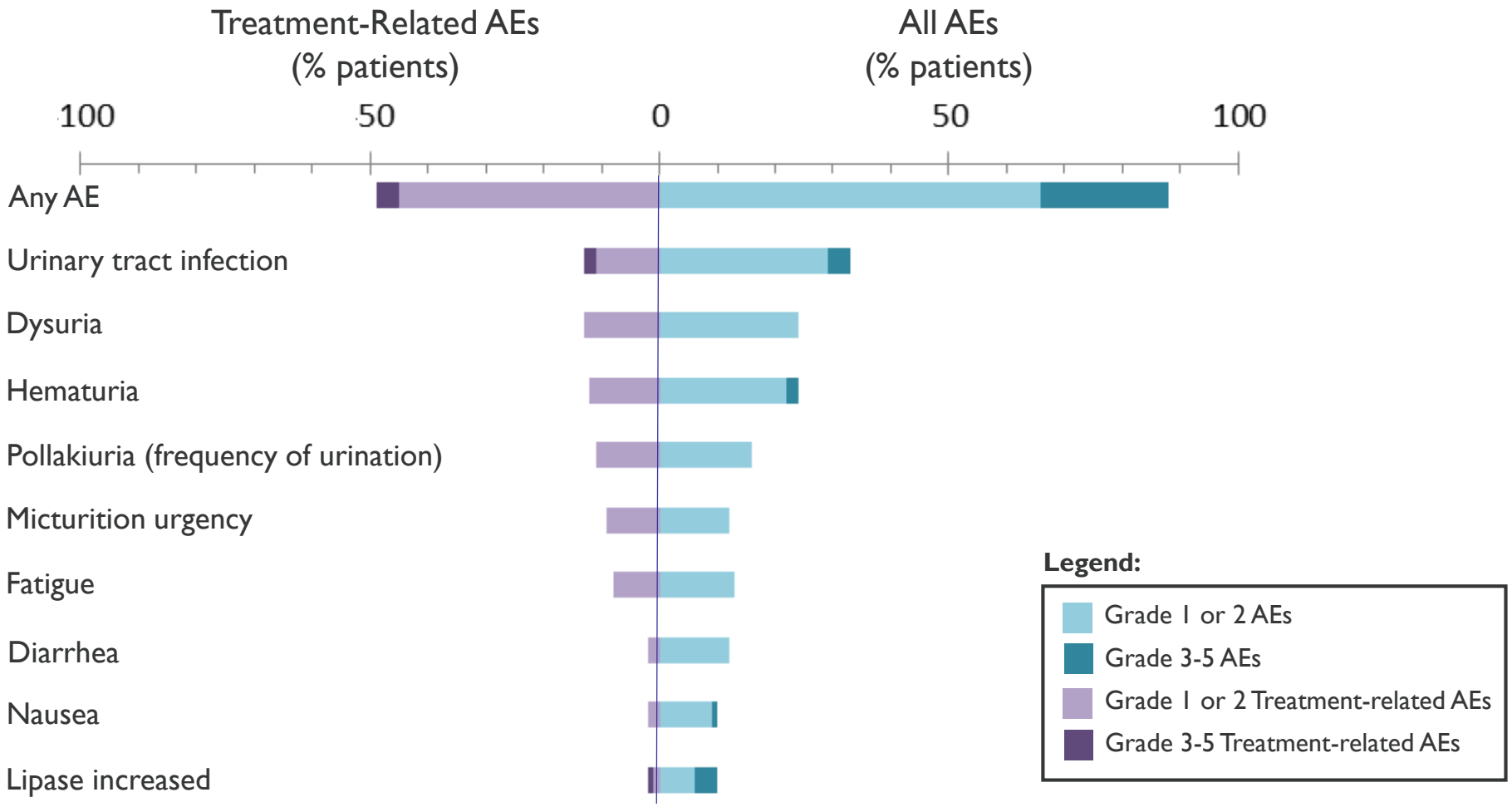
Safety and Tolerability: In our Phase III trial, AEs were generally low grade and resulted in a low rate of discontinuation

PIII
All Cohorts



Safety profile of Vicinium is favorable relative to BCG, Valstar and checkpoint inhibitors.

Note: AE=Adverse Event

Safety and Tolerability: Our Phase II and Phase III clinical trials are highly consistent for safety and tolerability

PII & PIII
All Cohorts

Increased dosing in the Phase III trial does not lead to an increase in incidence or severity of AEs

Treatment-related serious adverse events reported:

- Phase II Clinical Trial: 6 SAEs reported, none determined to be related to treatment by the investigator.
- Phase III Clinical Trial: 3 patients reported 4 events including grade 4 cholestatic hepatitis, grade 5 renal failure[1], grade 3 acute kidney injury[2], and grade 2 pyrexia.

Category	Phase II (n=46)	Phase III (n=133)
Any AE	43 (94%)	117 (88%)
Grade 3-5 AEs	9 (20%)	29 (22%)
Treatment-related AEs	30 (65%)	65 (49%)
Treatment-related Grade 3-5 AEs	3 (7%)	5 (4%)
Any SAE	6 (13%)	19 (14%)
Treatment-related SAEs	0 (0%)	3 (2%)
Discontinuations due to AEs	0 (0%)	5 (4%)

[1]90-year-old man started the trial Mar. 2016. In May 2016, admitted for renal failure and started dialysis. Two weeks later, patient opted to discontinue dialysis, entered hospice and died in Jun. 2016. Case reported to DSMB, FDA and Health Canada. [2]74-year-old man started the trial Nov. 2016. In Dec. 2016, admitted for acute kidney injury. In 2017, protocol amended to enhance monitoring, and investigators educated. No new serious related renal events since.

Phase III Trial: Patient Demographics

CHARACTERISTICS	COHORT 1	COHORT 2	COHORT 3
	CIS that recurred within 6 months of adequate BCG (Refractory)	CIS that recurred >6 months but ≤11 months of adequate BCG (Relapsing)	Papillary tumors (without CIS) that recurred within 6 months of adequate BCG
Total patients enrolled	86	7	40
Evaluable patients at 3-months	86	7	40
Evaluable patients at 6-months	86	7	40
Evaluable patients at 9-months	85	7	39
Evaluable patients at 12-months	84	7	39
Median age (years)	73	67	75
Males/Females	63/23	6/1	34/6
Median prior treatment for NMIBC			
BCG cycles (courses)	3 (range 2-14)		3 (range 2-10)
BCG cycles (instillations)	12 (range 8-45)		12 (range 8-48)
Intravesical chemotherapy	0 (range 0-23)		0 (range 0-6)
TURBT	3 (range 0-28)		3 (range 0-10)

TURBT: transurethral resection of bladder tumor
Note: Data reflected are as of March 1, 2019 data cutoff

Phase III Trial: Data Tables by Cohort for Carcinoma *in situ*

Cohort 1 (n=86) Complete Response Rate		
Time Point	Evaluable Patients	Complete Response Rate (95% Confidence Interval)
3-months	n=86	37% (27%-48%)
6-months	n=86	26% (17%-36%)
9-months	n=85	19% (11%-29%)
12-months	n=84	15% (9%-25%)

Cohort 2 (n=7) Complete Response Rate		
Time Point	Evaluable Patients	Complete Response Rate (95% Confidence Interval)
3-months	n=7	57% (18%-90%)
6-months	n=7	57% (18%-90%)
9-months	n=7	43% (10%-82%)
12-months	n=7	14% (0%-58%)

Note: Data reflected are as of March 1, 2019 data cutoff

Additional Vicinium Clinical Data

Preliminary Phase II vs. Phase III Complete Response Rate		
Time Point	Phase II Pooled CRR (95% Confidence Interval)	Phase III Pooled CRR (95% Confidence Interval)
3-months	40% (26%-56%)	39% (29%- 49%)
6-months	27% (15%-42%)	28% (19%-38%)
9-months	18% (8%-32%)	21% (13%-30%)
12-months	16% (7%-30%)	15% (9%-24%)

Dosing:

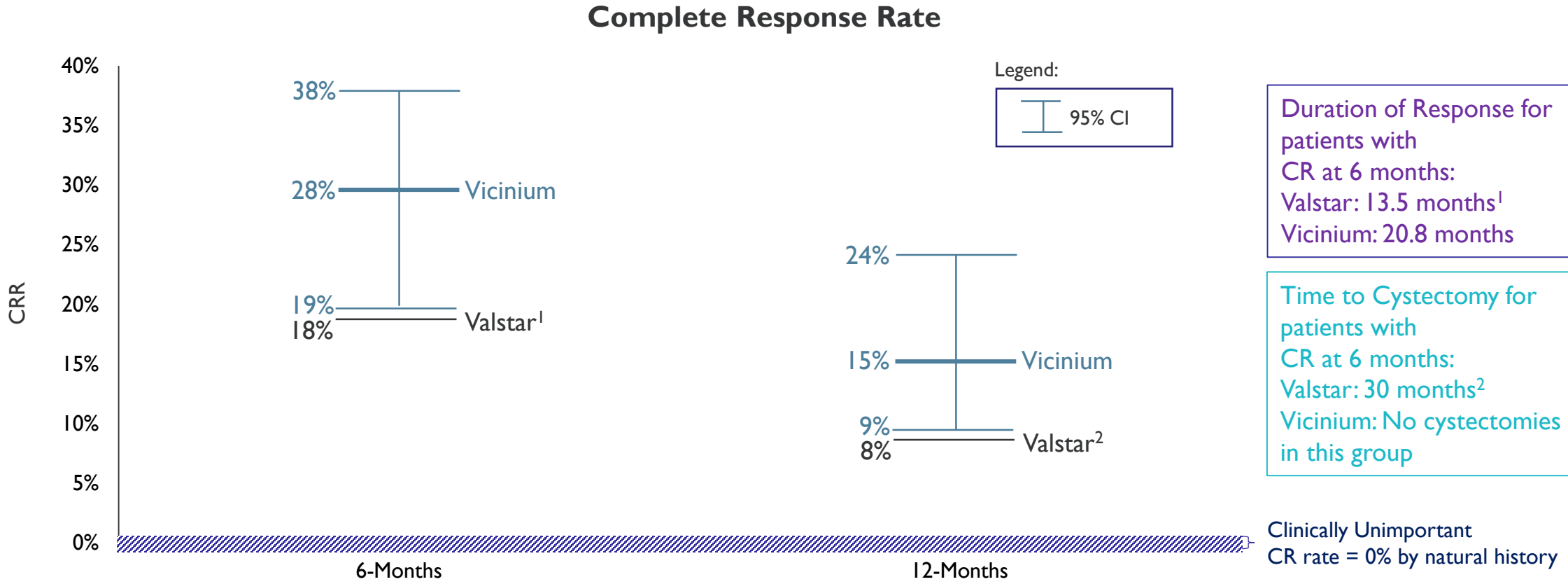
Phase II:
Cohort 1: 6 weekly induction doses, 6 weeks off; if a CR achieved, proceed to maintenance dosing of every 3 months for 9 months; those with residual disease at 3 months had option of to start maintenance or receive a second induction course.
Cohort 2: 12 weekly induction doses; if a CR achieved, proceed to maintenance dosing of every 3 months for 9 months.

Phase III:
Biweekly induction doses for 6 weeks followed by weekly dosing for 6 weeks; if a CR achieved, proceed to maintenance of every other week dosing for 2 years total.

Note: Phase III data are as of March 1, 2019 data cutoff

Complete Response Rate: We believe our 95% confidence interval rules out the CRR for Valstar and a clinically unmeaningful CRR

PIII
CIS Patients



Duration of Response for patients with CR at 6 months:
Valstar: 13.5 months[1]
Vicinium: 20.8 months

Time to Cystectomy for patients with CR at 6 months:
Valstar: 30 months[2]
Vicinium: No cystectomies in this group

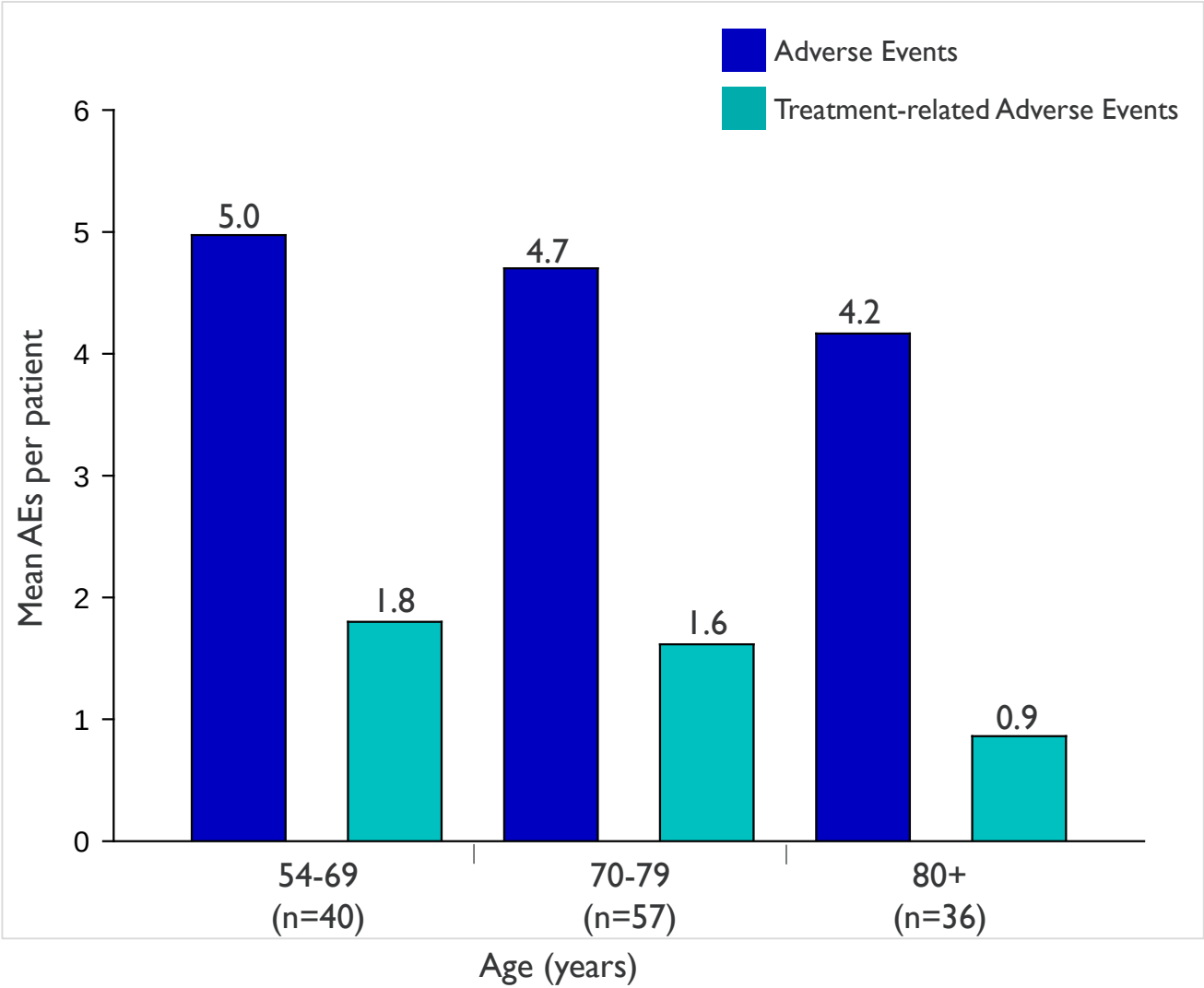
FDA Guidance: For single-arm trials of patients with BCG-unresponsive NMIBC in patients with CIS that use complete response rate as the primary endpoint, the lower bound of the 95 percent confidence interval around the observed response rate should rule out a clinically unimportant complete response rate.

Sources:
[1]Valstar prescribing information. 6-month complete response data used as basis for FDA approval of Valstar in 1998. [2]Everyday Urology. Volume 1 Issue 3. *Emerging Therapy for BCG-Unresponsive Non-Muscle Invasive Bladder Cancer.* Dinney 2016.
Data reflected are as of March 1, 2019 data cutoff

sesen bio

Safety and Tolerability: No age-related increase in adverse events in our Phase III trial

PIII
All Cohorts



Note: Data reflected consist of patients from all cohorts 1, 2 & 3 (n=133) as of March 1, 2019 data cutoff.
Mean AEs for all patients: 4.6 (range 0-26), Mean treatment-related AEs for all patients: 1.5 (range 0-17).

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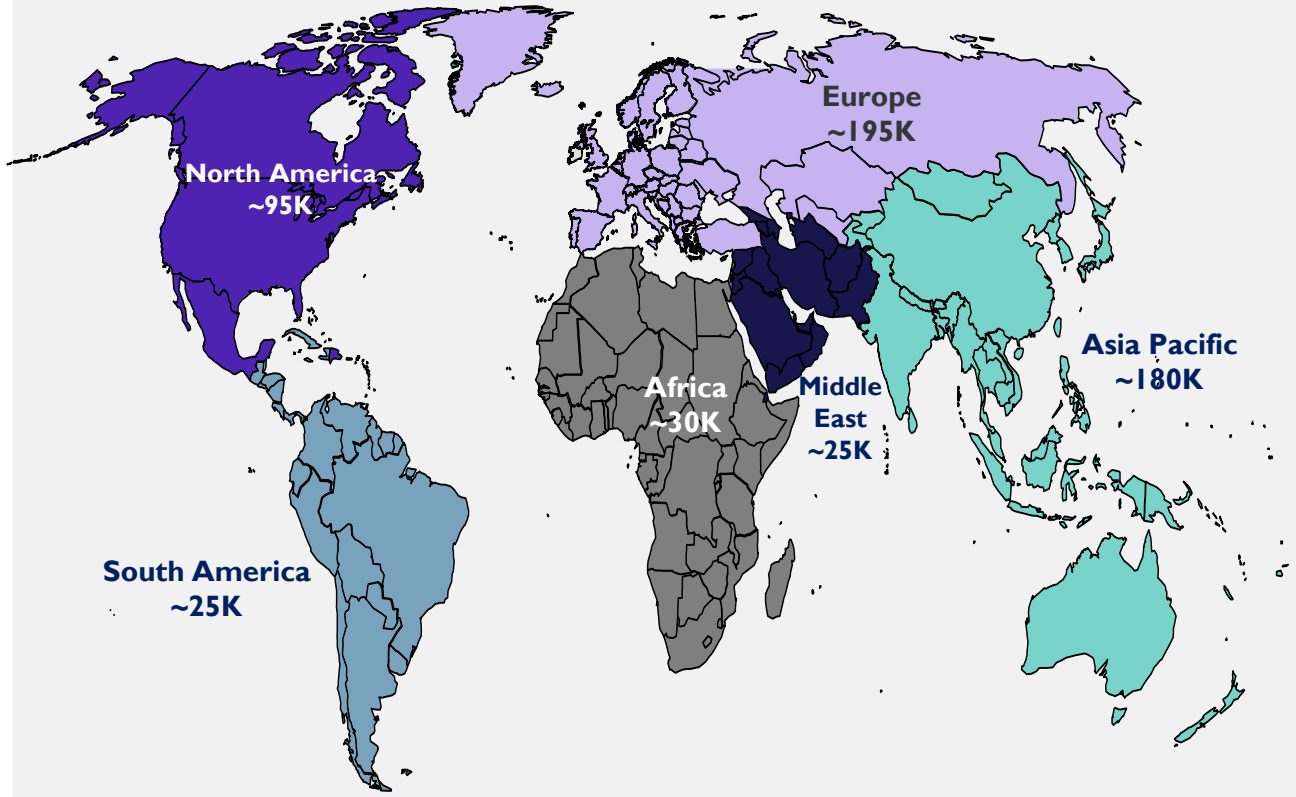
Bladder cancer is highly prevalent with tremendous unmet medical need

~550,000 New Cases Each Year Globally[1]

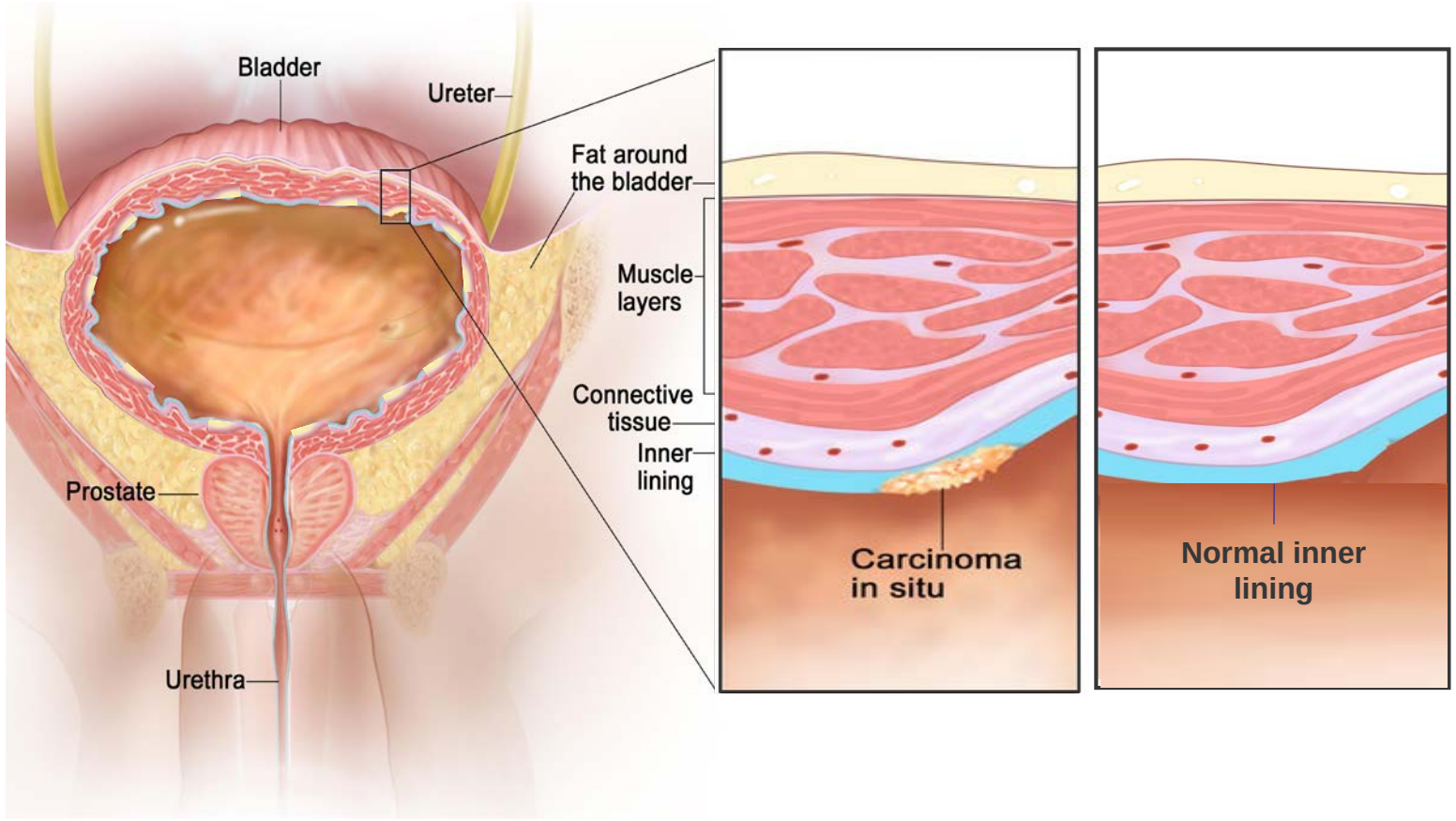


- $4B+ in annual treatment costs for bladder cancer in the US alone[2]
- 75-85% diagnosed as NMIBC[3]
- Limited treatment options for high-risk NMIBC
  - Only three approved treatments in the last 100 years
  - BCG remains standard-of-care in many countries
    - 50% patients fail within the 1st year[2]
    - 90% of patients fail within 5 years[2]
  - Radical cystectomy is recommended option after BCG
  - Global BCG shortage potentially limiting access and full dosing for patients

Sources: [1]World Cancer Research Fund. Bladder Cancer Statistics. 2019. [2]Mossanen M. Curr Opin Urol. 2014. [3]Therapeutic Advances in Urology. *Best Practices in the Treatment of Non-muscle Invasive Bladder Cancer.* 2012.

Carcinoma *in situ*: the most difficult form of NMIBC to treat

Carcinoma *in situ* vs. Normal Bladder Lining:



Clinical Trial Implications:

- Field change disease often involving the entire bladder lining that is very difficult to treat
- Failed on two or more courses of BCG, which is the gold standard for treatment of high-risk NMIBC
- Rigorous local and independent central review of all urine cytology and biopsy samples
- Complete response definition means that the bladder is completely cancer free at each timepoint

Note: Diagram is for illustrative purposes

Significant unmet need for innovative medical therapies to treat NMIBC

Only 3 products have ever been approved by the FDA for NMIBC

Product	FDA Approval	Additional Product Information
Thiotepa	1959	Rarely used in current treatment regimens
BCG*	1989 (Tice)	Recommended first line treatment
Surgery: Radical Cystectomy		Recommended second line treatment
Valstar	1998	Used only when radical cystectomy is contraindicated

Source:
National Institute of Health. *Development of Systemic and Topical Drugs to Treat Non-muscle Invasive Bladder Cancer*. Jarow et. al. 2015.
*Note: BCG Connaught strain was approved in 1990 and supply in the US in 2012.

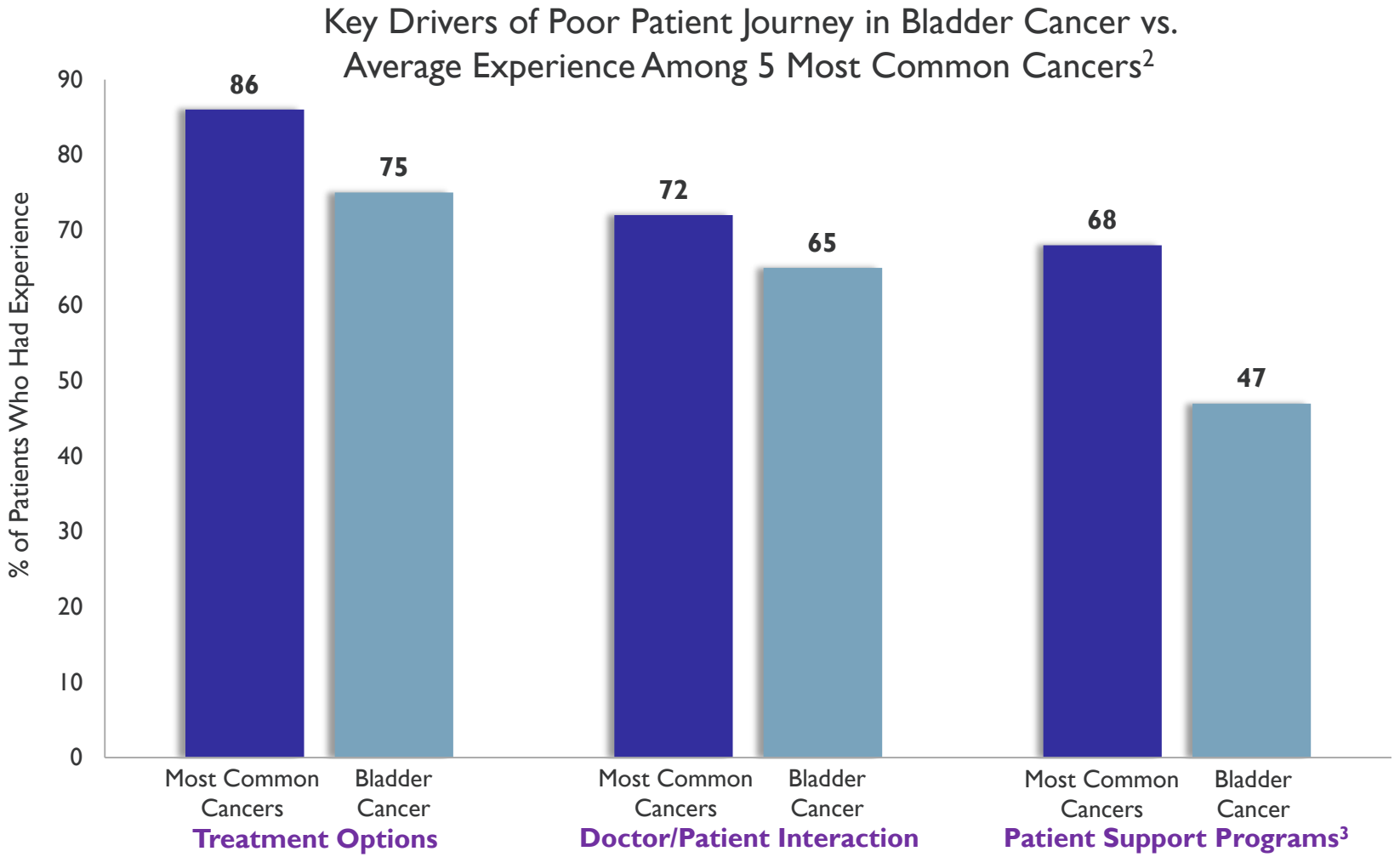
Radical cystectomy remains recommended treatment option after BCG failure

60-70% lifetime risk of cystectomy associated with NMIBC[1]

- Complex, long surgical procedure (10+ hours)
- Significant rates of morbidity (30-60% within 90 days) and mortality (2-9% within 6 months)[2]
  - 64% complication rate within 90 days[3]
  - ~35% of patients require ER visits and 26% require readmission[3]
  - Additional complications can occur as most patients with NMIBC are elderly and often have co-morbidities
- Tremendous impacts to patient quality of life
  - Life following radical cystectomy requires catheterization and urinary diversion

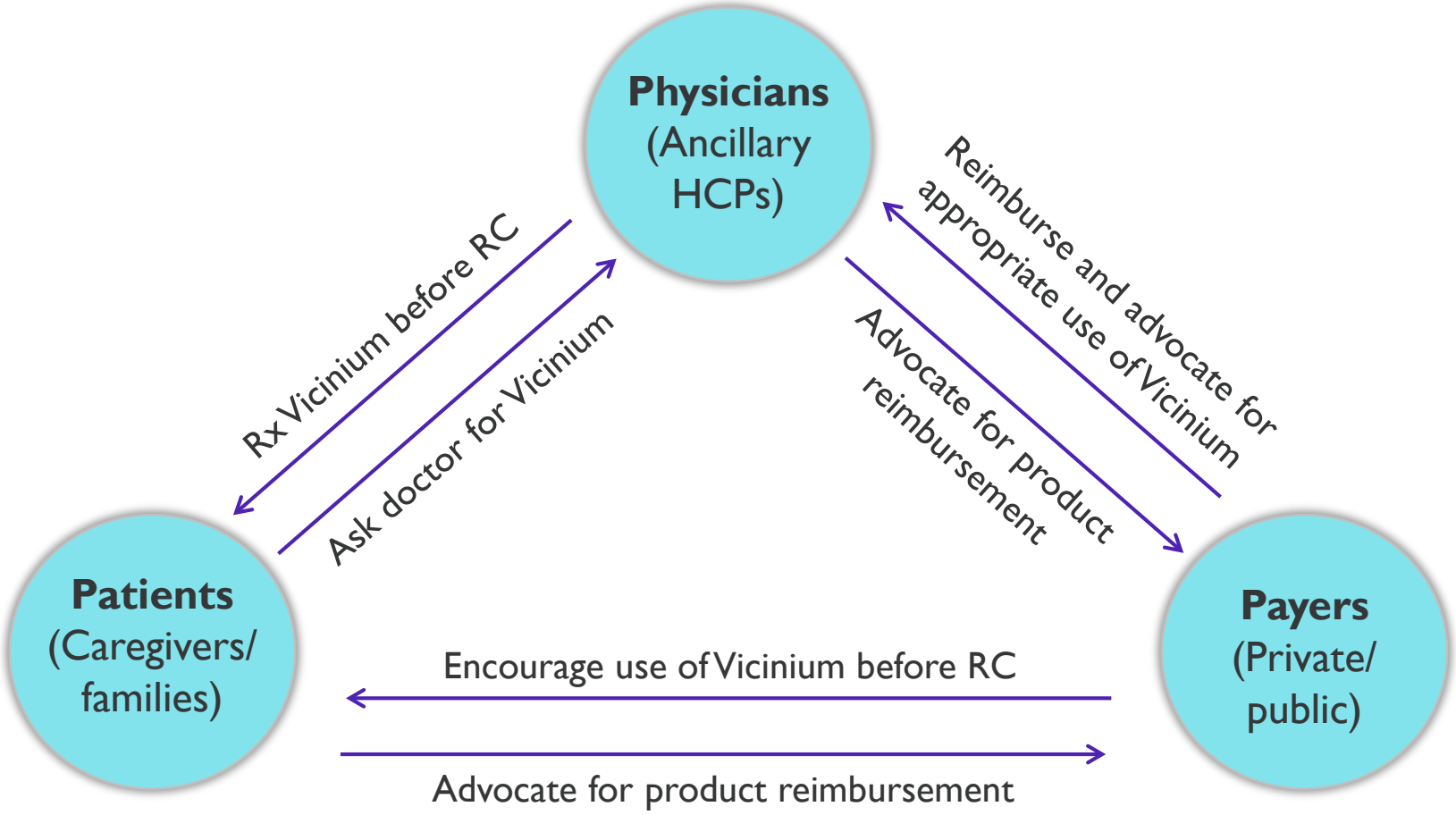
Source:
[1]Aldousari, S. Can Urol Assoc. J. 2010 Feb. [2]Steinberg P. Expert Rev Anticancer Ther. 2012. [3]HFalchook, A. *Bladder Cancer: Mortality, Morbidity, and QoL After Treatment.* 2014.

Patient surveys have shown that the experience of those with bladder cancer is one of the poorest[1]



Sources: [1]Cancer Patient Experience Survey 2011/12. Department of Health. N=71,793. https://www.quality-health.co.uk/resources/surveys/national-cancer-experience-survey/201112-national-cancer-patient-experience-survey-1/201112-national-cancer-patient-experience-survey-reports/495-cancer-patient-experience-survey-national-report-2011-12/file. [2]Most common cancers include breast, lung, prostate, colorectal, and skin cancers. SEER Database. https://seer.cancer.gov/statfacts/html/urinb.html. [3]Includes self-help groups and financial assistance.

Virtuous Cycle: High possibility that all three key segments are advocates & take action



Sources:
Sesen Bio internal market research: Patient Journey Insights, Blue Print qualitative study May 2018, n=24; Sesen Market Opportunity, Monitor Deloitte qualitative and quantitative (n=34) study October 2018; Community Urologist in-depth interviews (IDIs), October 2018, n=5; [6]Sesen Bio Qualitative Market Research Urologist/KOL IDIs February 2019, n=11.

Note: RC= Radical Cystectomy

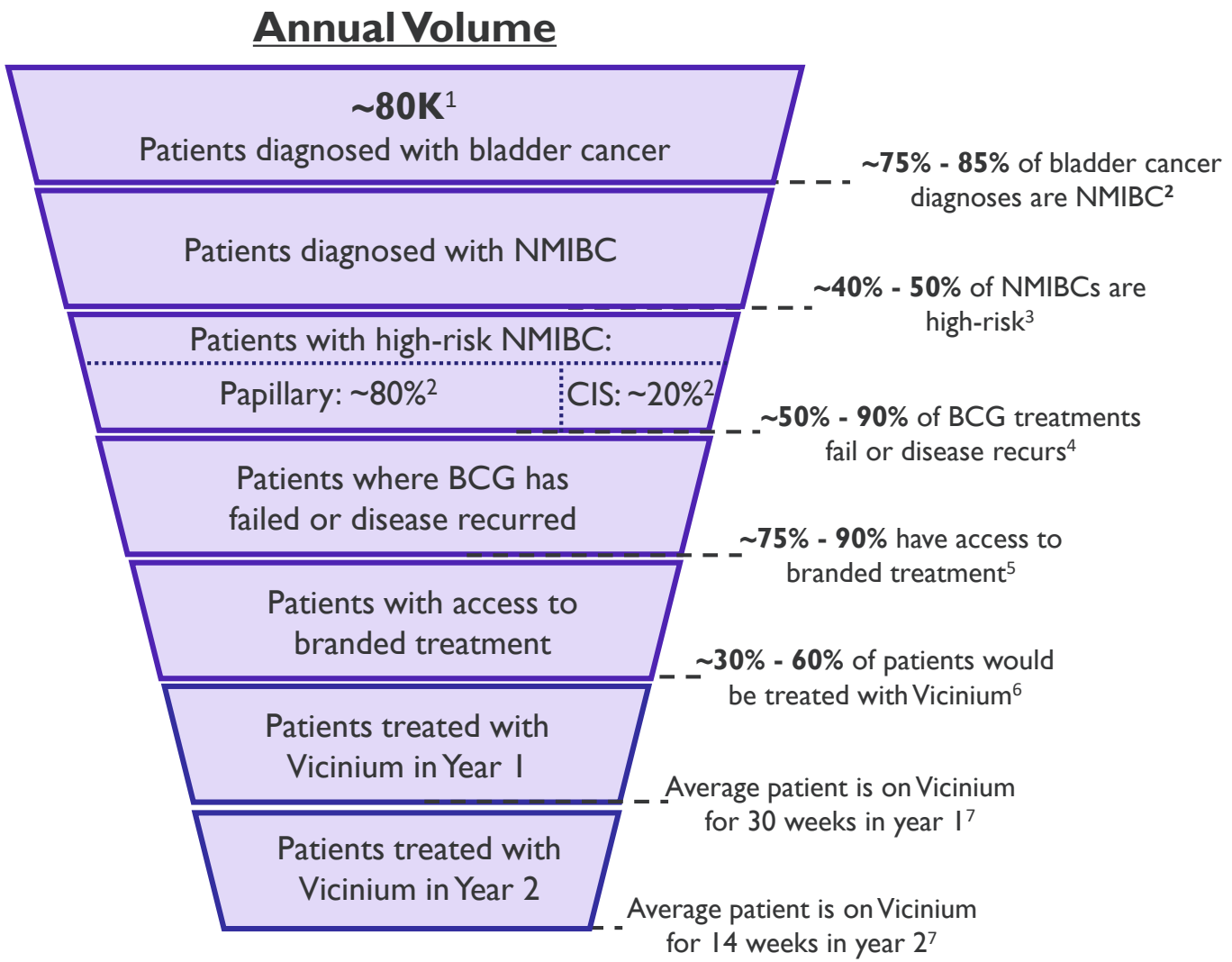
Vicinium as potential to provide continuity of care for patients with NMIBC

BCG TREATMENT	VICINIUM TREATMENT
2-hour infusion, hold, and rotation	✓
Administration through urinary catheter	✓
Treated by Urologist	✓ (same Urologist)
Medical support team throughout care	✓ (same team)
Response assessment every 3 months	✓

"I have been struck by the high patient tolerability of Vicinium which is instilled just like intravesical chemotherapy or BCG, making it easy for the treating Urologist."

- Dr. Michael Jewett, Key Opinion Leader and Phase II clinical trial lead investigator

Addressable Market (US)

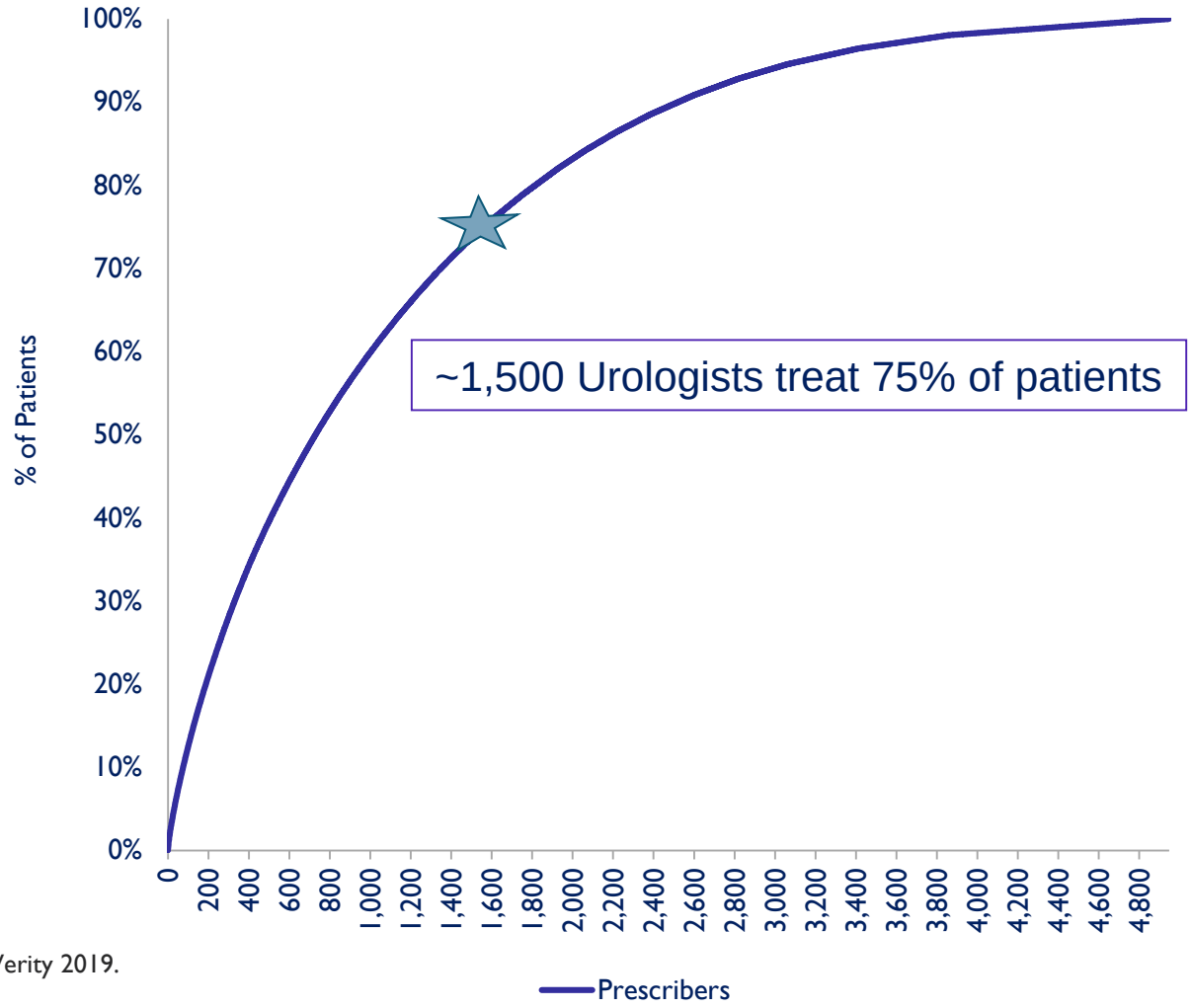


Sources:
[1]National Cancer Institute, SEER Cancer Stat Facts: Bladder Cancer, 2017. [2]Therapeutic Advances in Urology. *Best Practices in the Treatment of Non-muscle Invasive Bladder Cancer.* 2012. [3]Aldousari, S. et al (2010). Update on the management of non-muscle invasive bladder cancer. *Can Urol Assoc J*, 4(1), 56-64. [4]Memorial Sloan Kettering Cancer Center. *Bladder Cancer Management After BCG Failure*. 2014. [5]ClearView Analysis March 2019. [6]Sesen Bio Qualitative Market Research Urologist/KOL IDIs February 2019, n=11. [7]Phase III trial data.

Only ~1,500 Urologists account for the bulk of NMIBC treatment and are concentrated in group practices allowing for a very efficient commercial model

~60% of Urology practices have ≥5 Urologists[1]

BCG Prescribers[2]

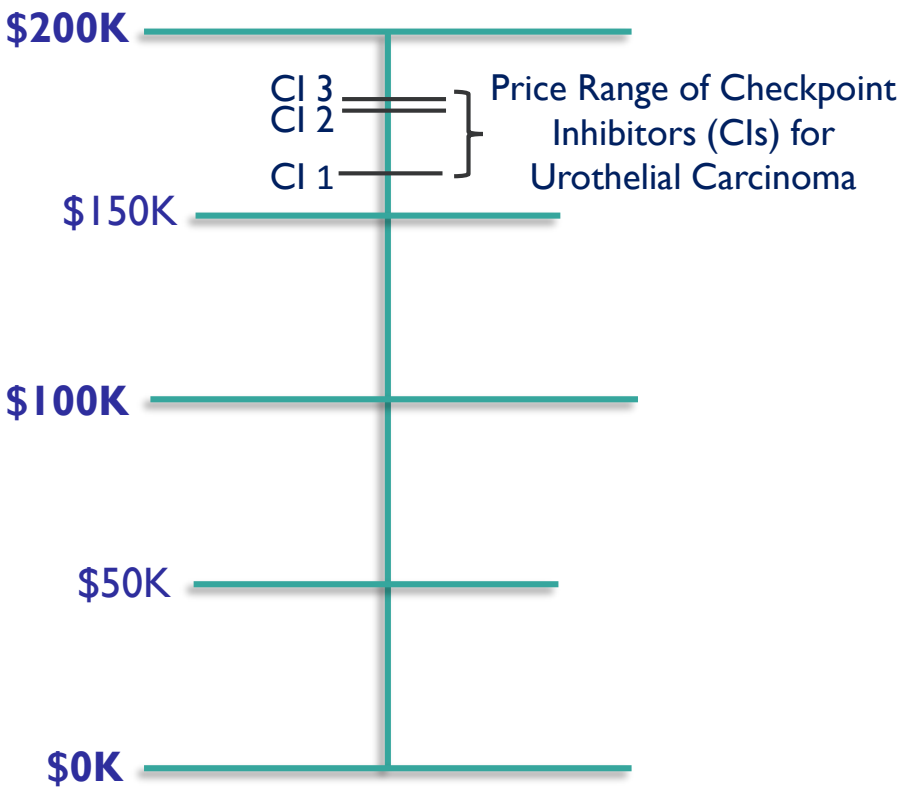


Source:
[1]AUA State of the Urology Workforce and Practice in the United States. 2017. [2]Health Verity 2019.

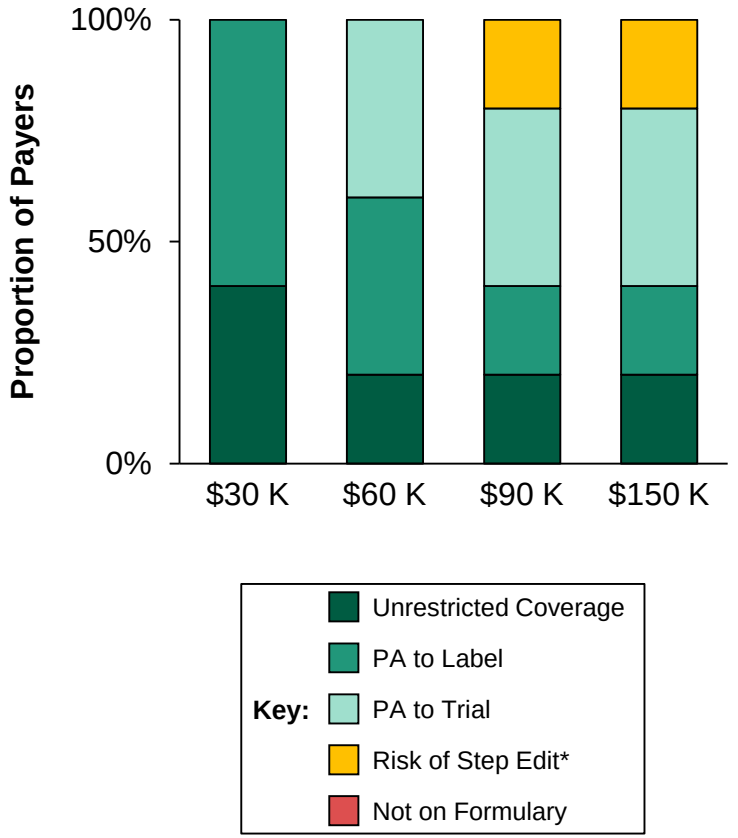
Pricing and Reimbursement (US)

Price Reference

(Annual Cost)[1]



Payer Management Responses to Pricing[2]



Sources:
[1]Center for Medicare and Medicaid Services (CMS) Average Selling Price (ASP) Price List. CI price benchmarks are based on Keytruda, Opdivo and Tecentriq.
[2]Payer Interviews, ClearView Analysis, n=10, March 2019.

*Note: Payers cited a possibility of using a step edit, but could not be certain, as the ability to use a step edit is new to their organization's Medicare Advantage medical benefit.
PA = Prior Authorization

We estimate the OUS opportunity for Vicinium is 2-3 larger than the US

Geography	Est. Incidence Relative to U.S.[1]	Est. Price Relative to U.S.[2]
EU5	1.2 – 1.4	0.50 – 0.71
Japan	0.4 – 0.6	0.60 – 0.70
Rest of Europe (Not including EU5)	1.0 – 1.2	0.60 – 1.10
North America (Not including U.S.)	0.1 – 0.3	0.55 – 0.70
South America	0.2 – 0.4	0.50 – 1.00
Asia (Not including Japan)	1.6 – 1.8	0.40 – 0.60
Africa	0.3 – 0.5	~0.75[3]
Middle East	0.2 – 0.4	1.10 – 1.20
Oceania	0.05 – 0.2	0.55 – 0.70

Sources: Ferlay. Intern. J. Canc. 2015; UN World Population Reports; SEER; GLOBOCAN; RedBook; Lauertaxe; Ameli; NICE; Vademecum; AIFA; NHI; CADTH; ANVISA; CBiP; Danish Medicines Agency; The Pharmaceutical Benefits Scheme; Saudi Food & Drug Authority; South African Medicine Price Registry; FiercePharma; ClearView Analysis. [1]Relative incidence is calculated from total bladder cancer, and does not account for differences in the distribution of patients between NMIBC and MIBC. [2]Pricing multiplier is based on publicly available pricing information; averaged based on ex-manufacturer price of Keytruda and Opdivo, and is likely to vary greatly for each pharmaceutical, and across different countries within each region. [3]South Africa price multiplier was based on Keytruda only, as Opdivo has not yet been priced.

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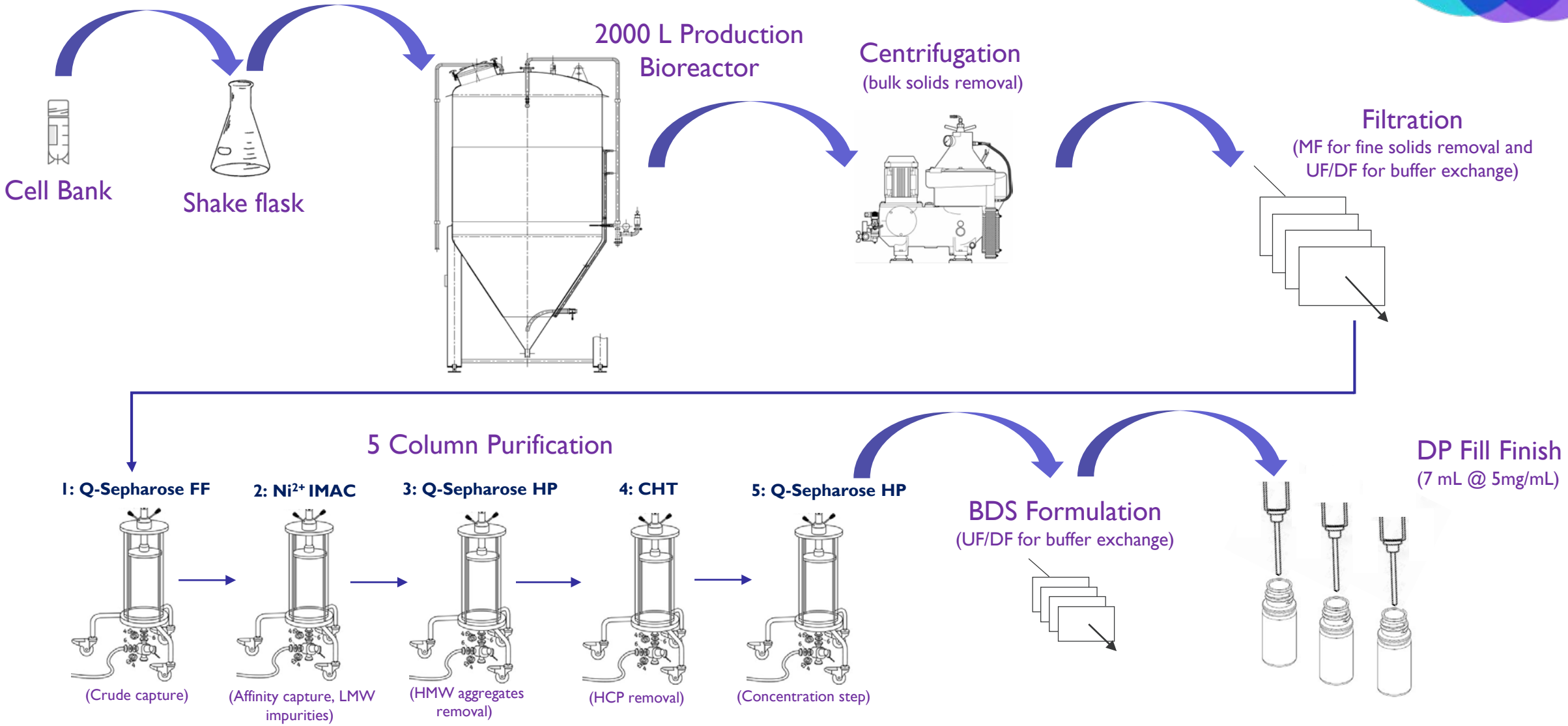
Manufacturing of Vicinium is expected to be reliable and inexpensive



MF, microfiltration; UF, ultrafiltration; DF, diafiltration; FF, Fast-flow; IMAC, immobilized metal affinity chromatography; HP, High-performance; CHT, ceramic hydroxyapatite; BDS, bulk drug substance; DP, drug product; LMW, low molecular weight; HMW, high molecular weight; HCP, host-cell protein.

Source: Arjune Premsukh, Joelle Lavoie JM, Jeannick Cizeau, Joycelyn Entwistle, Glen MacDonald. Protein Expression Purification. 2011 Jul;78(1):27-37.

Vicinium Comparability Strategy*

Guidance

"If a manufacturer can provide assurance of comparability through analytical studies alone, nonclinical or clinical studies with the post-change product are not warranted."[1]

Sesen's analytical comparability plan is comprised of 4 key elements:

1. Analytical Release Testing
   - Assesses the purity, biological activity and general characteristics of the protein (e.g. purity by HPLC, endotoxin content)
2. Biophysical Characterization
   - Assesses the structural characteristics of the protein (e.g. Peptide Mapping, Differential Scanning Calorimetry)
3. Forced Degradation Studies
   - Assesses the degradation pathway of the protein when exposed to stress conditions (e.g. purity by HPLC after temperature and pH extremes)
4. Stability Studies
   - Assesses the stability of the protein under long-term and accelerated storage conditions (e.g. purity by HPLC after storage at -20°C and 2-8°C)

***As of May 20, 2019, the Type C CMC meeting has been completed and we have reached agreement with the FDA on the Analytical Comparability Plan. Subject to final comparability data to be provided in the BLA submission, no additional clinical trials to establish comparability are deemed necessary at this time.**

[1]International Conference on Harmonisation (ICH) Q5E, Comparability of biotechnological/biological products subject to changes in their manufacturing process.
HPLC, high performance liquid chromatography.

We have experienced partners for the global manufacturing and supply of Vicinium

FUJIFILM Diosynth biotechnologies

- Licensed for commercial production of 8 approved products
- 25+ years developing and manufacturing biologics
- 310+ protein-based therapeutics in development and / or manufacturing
- Proven track record with FDA and worldwide regulatory agencies

Baxter

Baxter's BioPharma Solutions Business:

- 160 clinical and commercial programs
- 60+ years of experience in manufacturing of oncology products
- ISPE 2016 Facility of the Year Award at site of Vicinium manufacture
- Proven track record with FDA and worldwide regulatory agencies

sesen bio

Vicinium: A single cGMP Manufacturing Process

Vicinium cGMP manufacturing process producing a single fusion protein

• Inexpensive • Reliable • Simple (linear)

Single cGMP process

ADCs: complex (branched) cGMP manufacturing - multiple cGMP processes involving process intermediates