Nelmastobart (hSTC810)

STCube

Innovative Game Changer of Global IO Therapeutics Market

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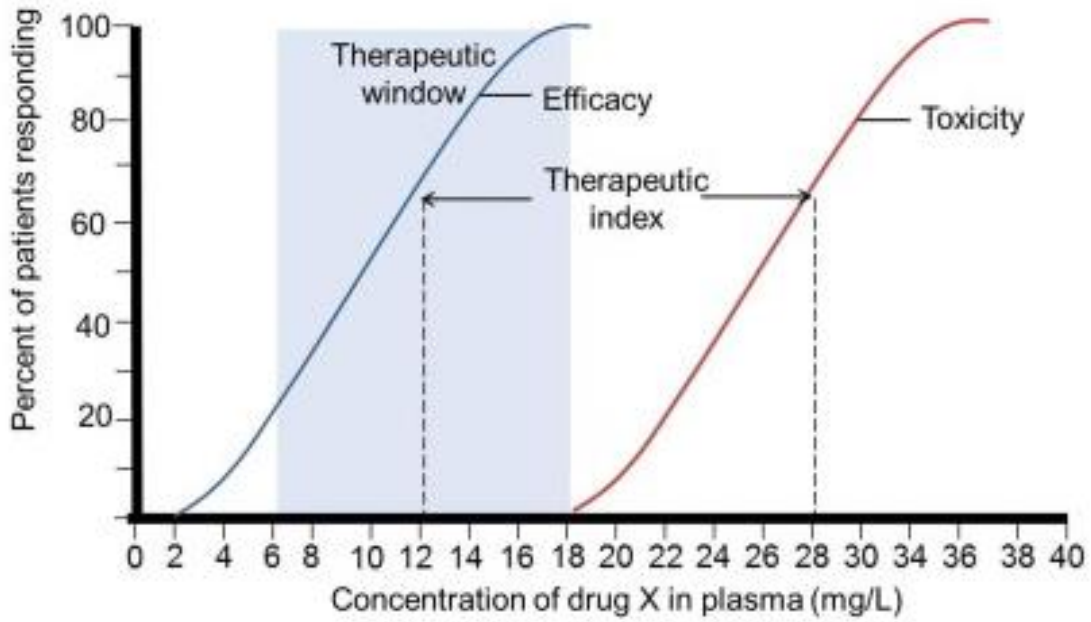
The Goal of Cancer Drug Discovery and Development: Increasing the "Therapeutic Index"

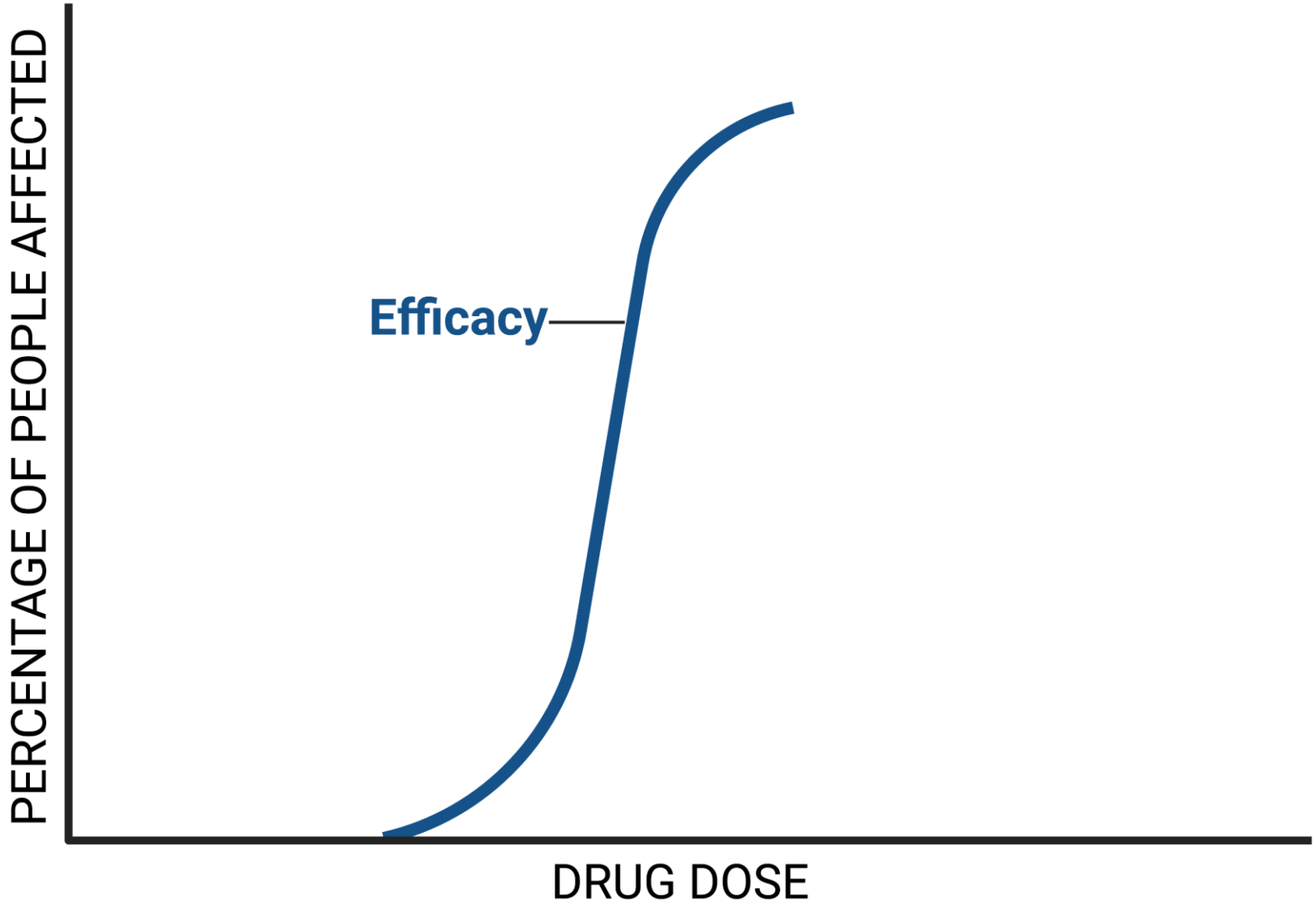


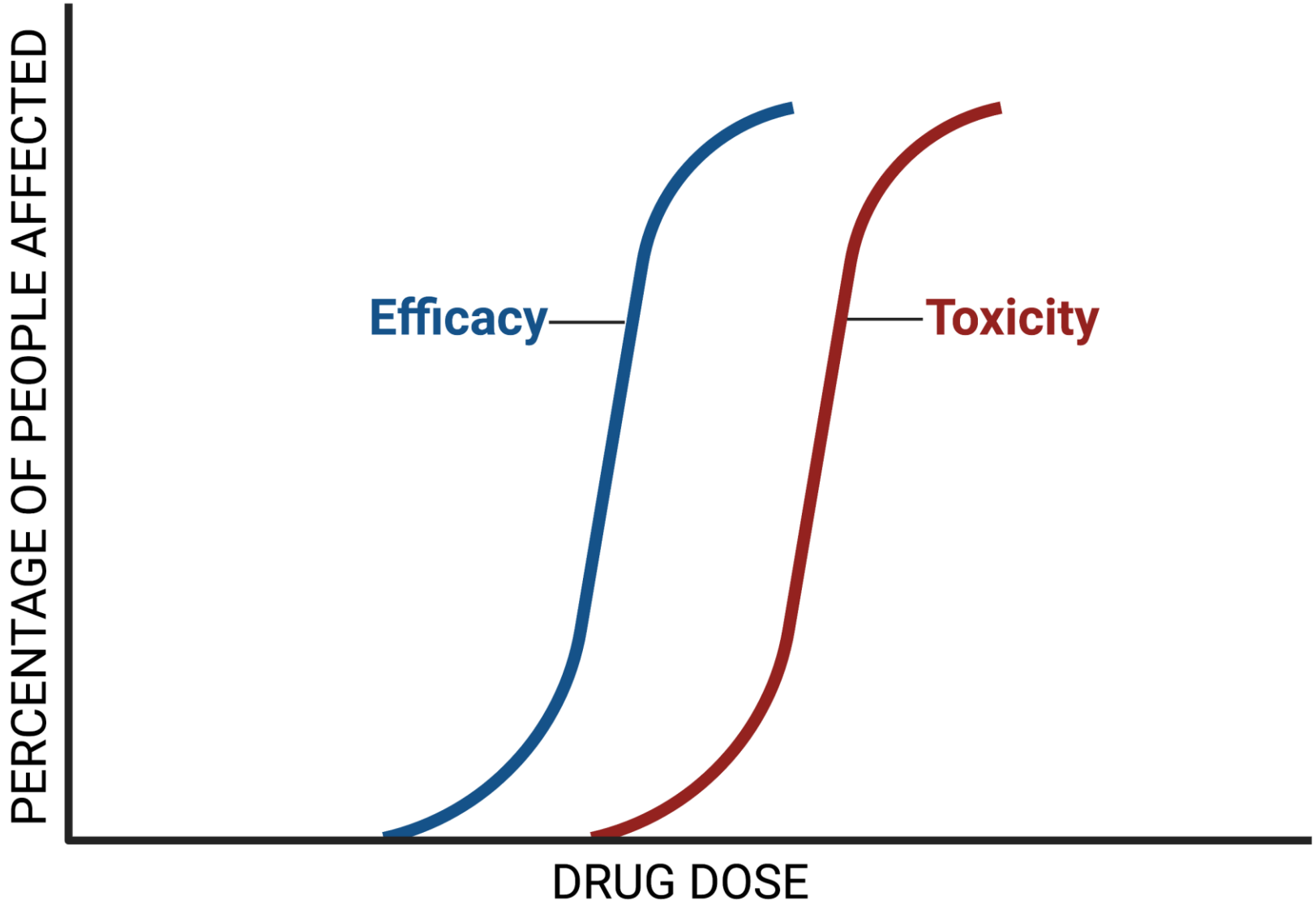
Ref: Handbook of Pharmacogenomics and Stratified Medicine (2014)

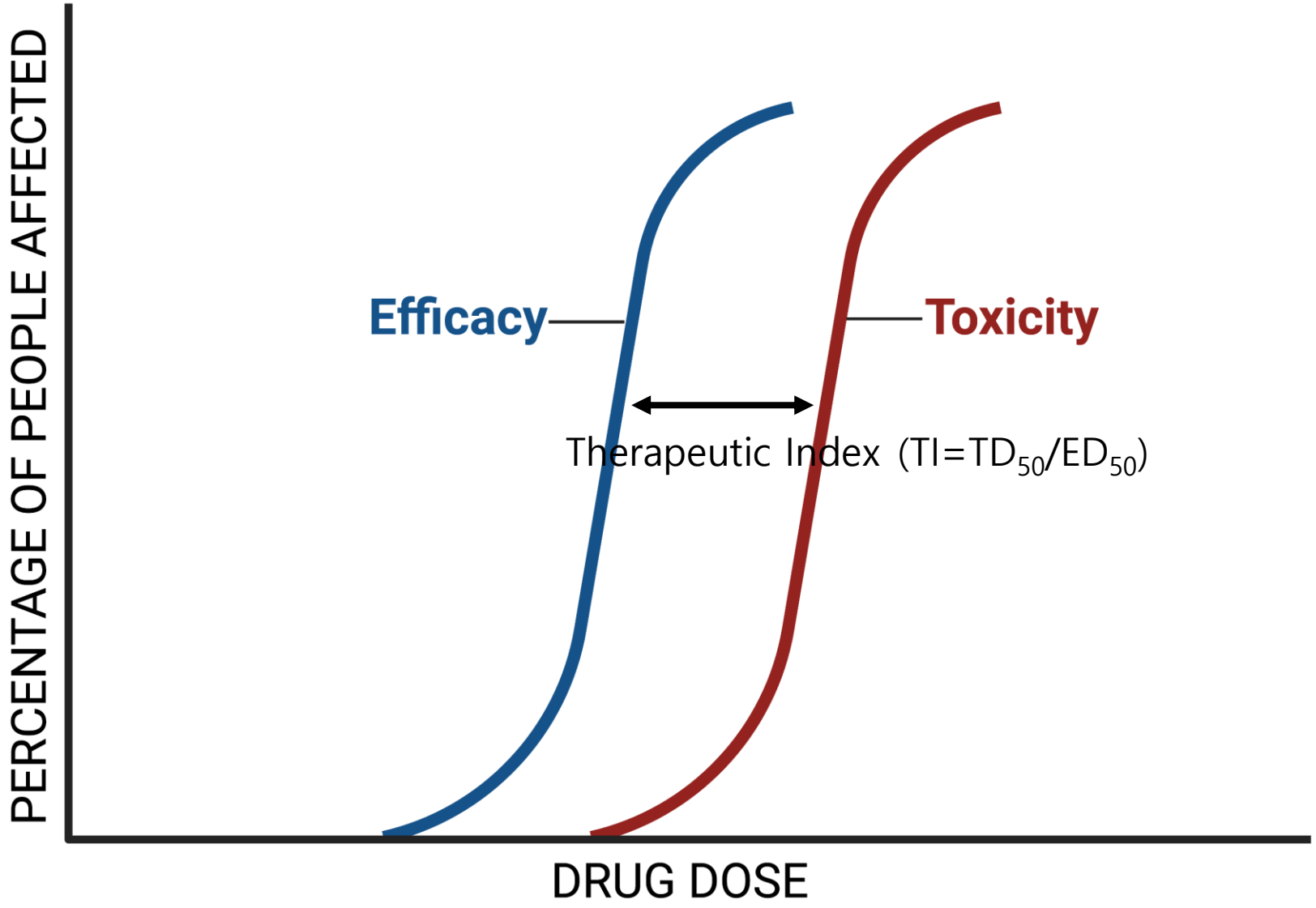
1. The goal of cancer drug development is to optimize the safety-efficacy profile of a drug. The therapeutic index is an important parameter in achieving this balance.
2. Therapeutic index is the dose range of a drug that provides safe and effective therapy with minimal adverse effects

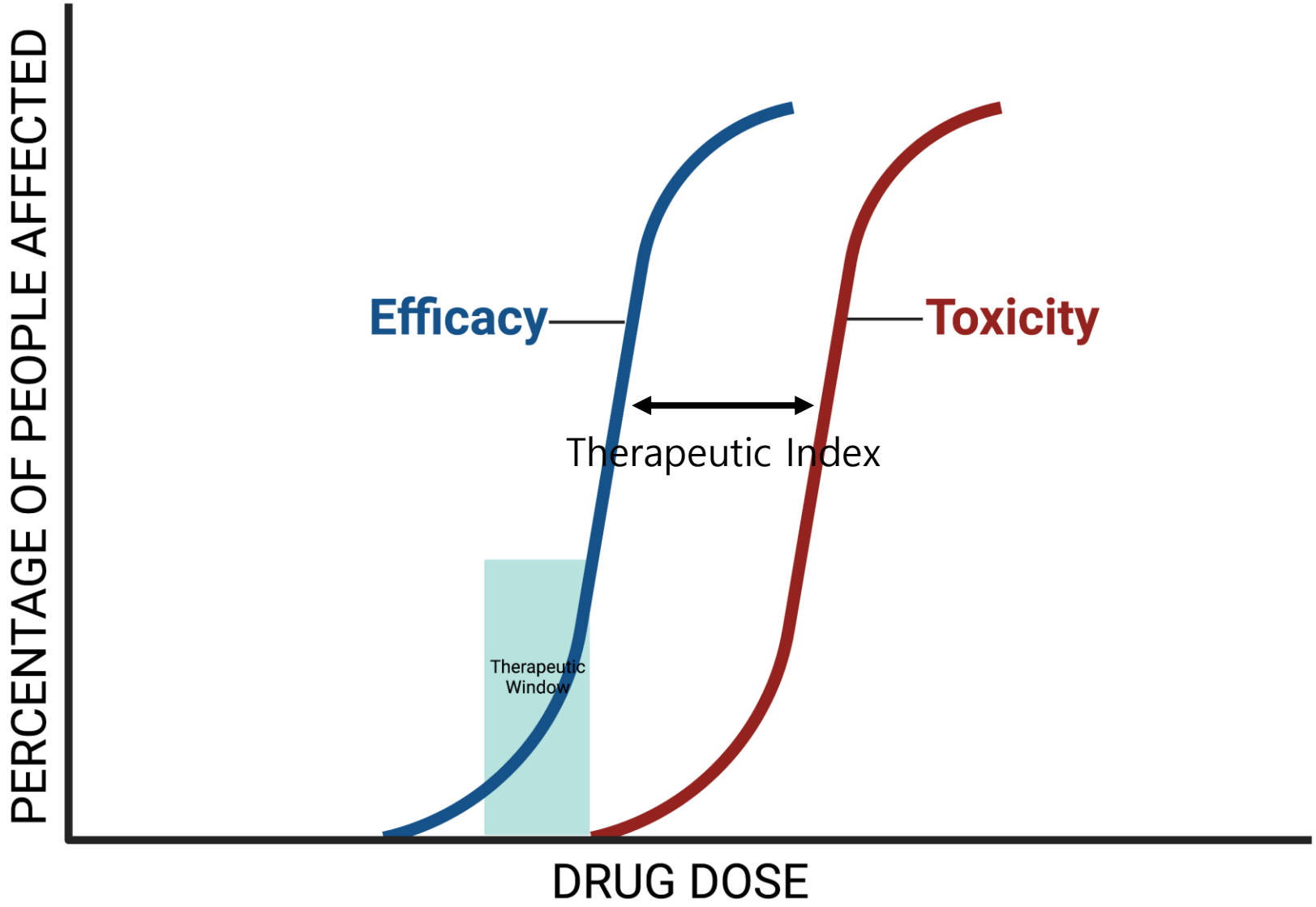
   If dose is too low = Drug is ineffective

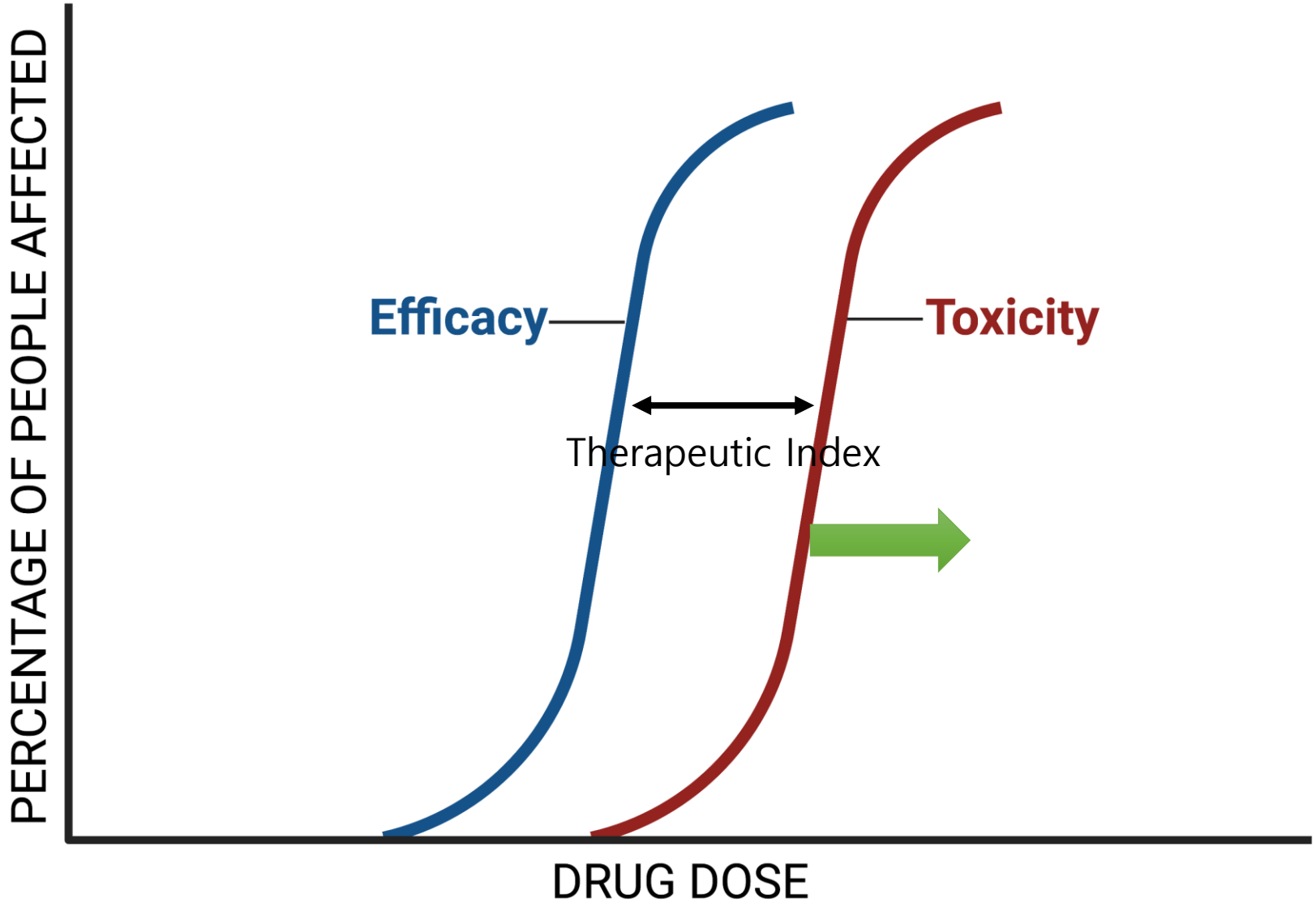
   If dose is too high = Risk of side effects

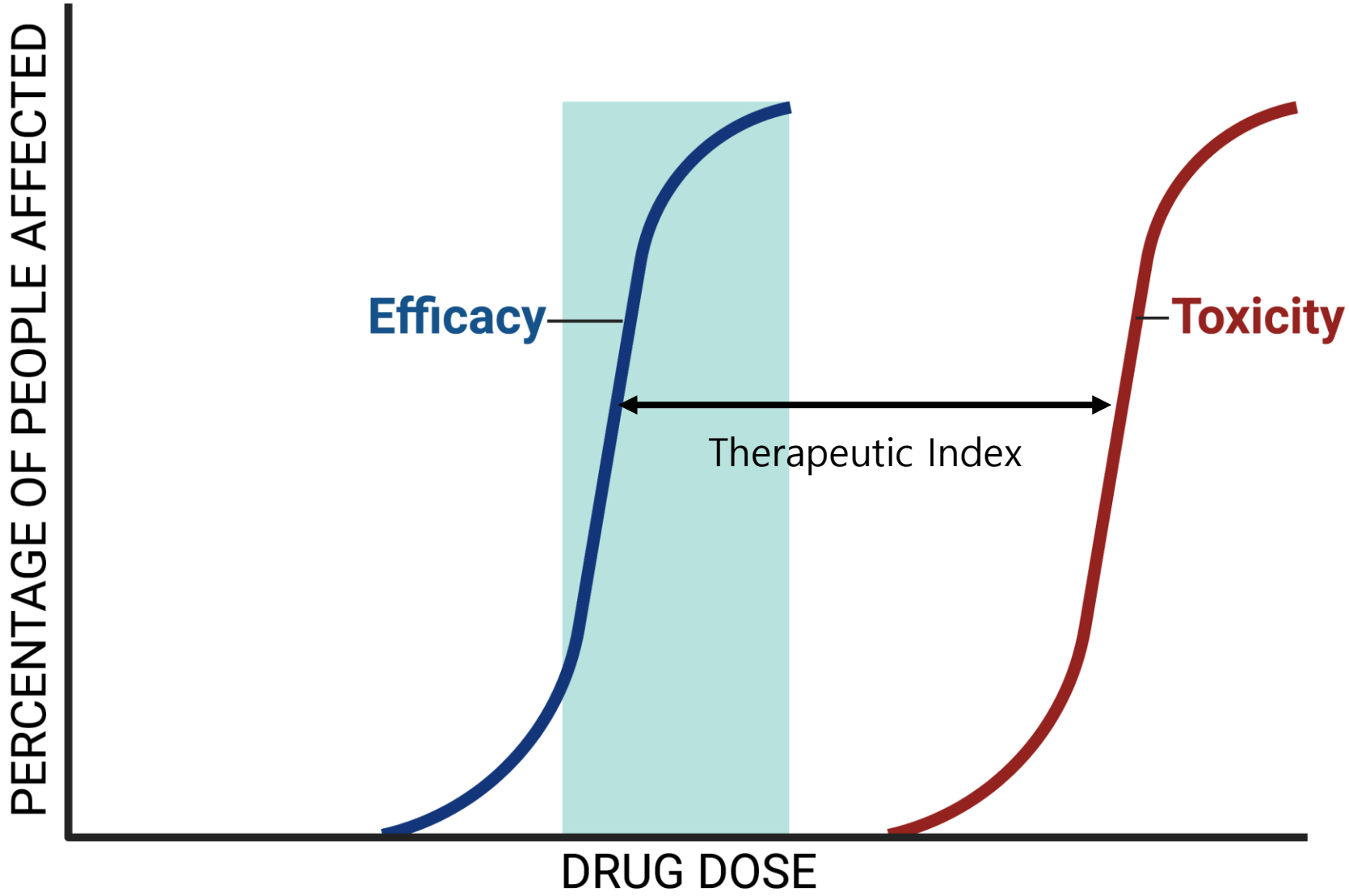

PERCENTAGE OF PEOPLE AFFECTED
Efficacy
DRUG DOSE

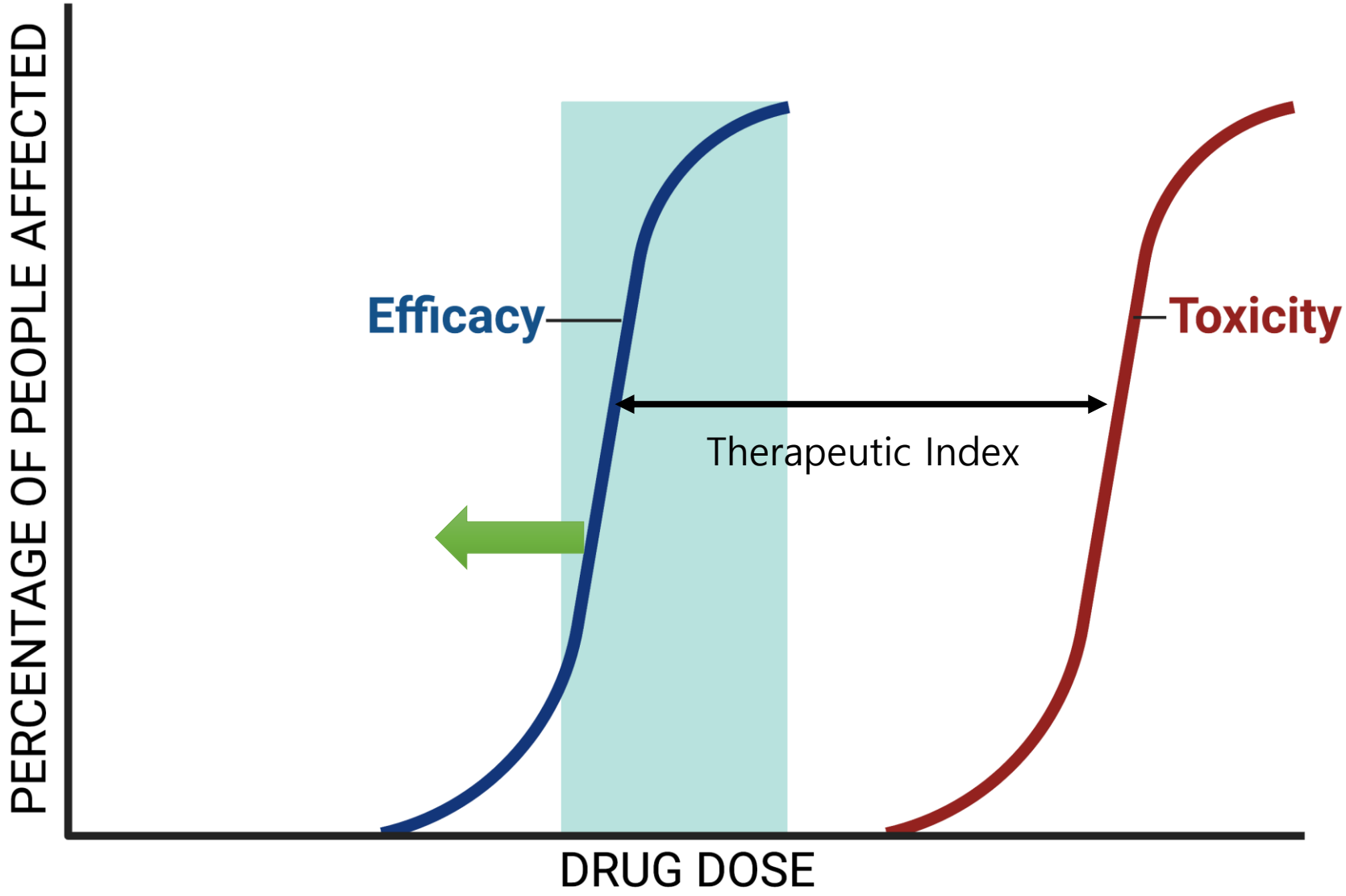

PERCENTAGE OF PEOPLE AFFECTED
Efficacy
Toxicity
DRUG DOSE

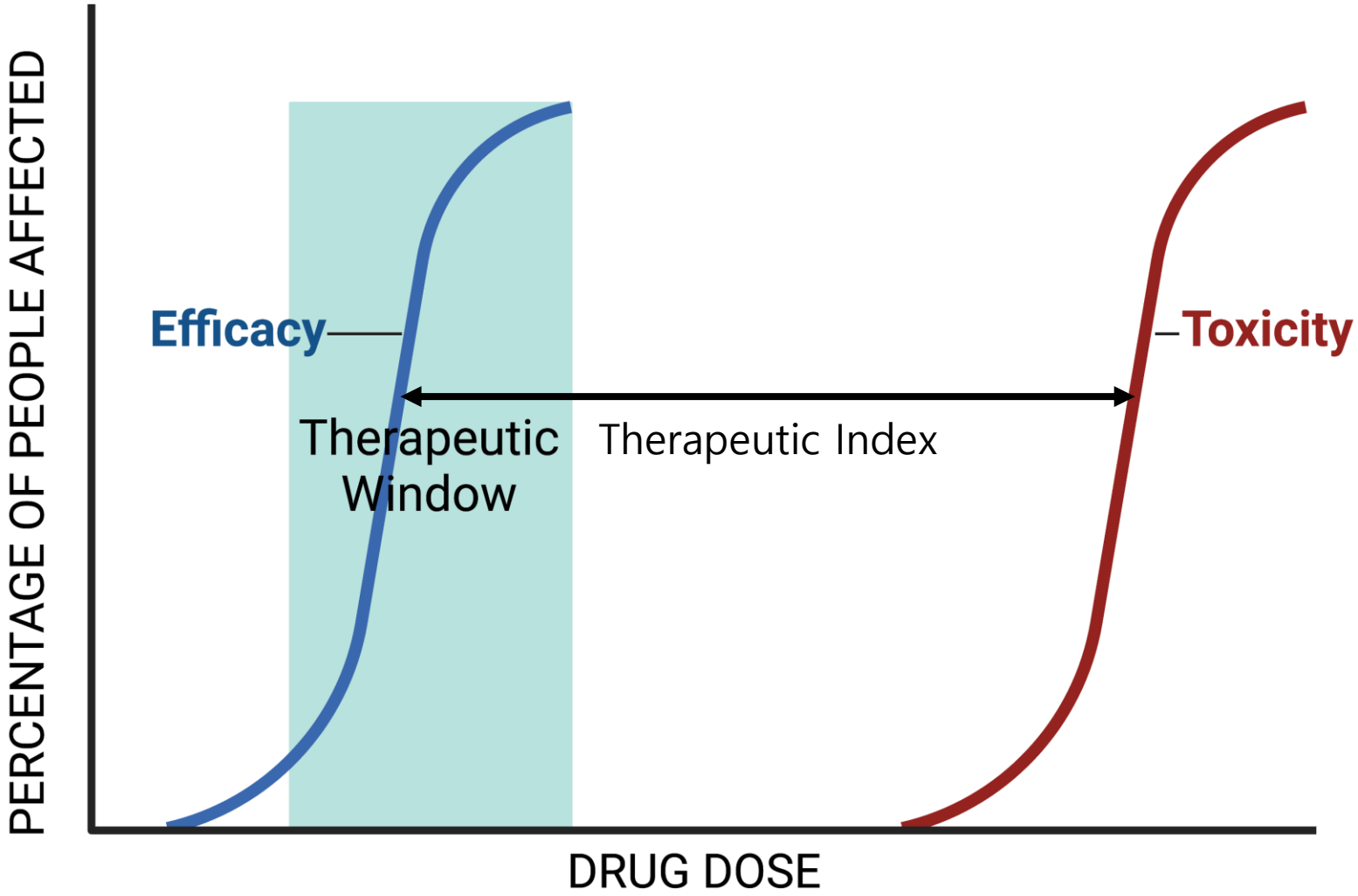

PERCENTAGE OF PEOPLE AFFECTED
Efficacy
Toxicity
Therapeutic Index (TI=TD50/ED50)
DRUG DOSE

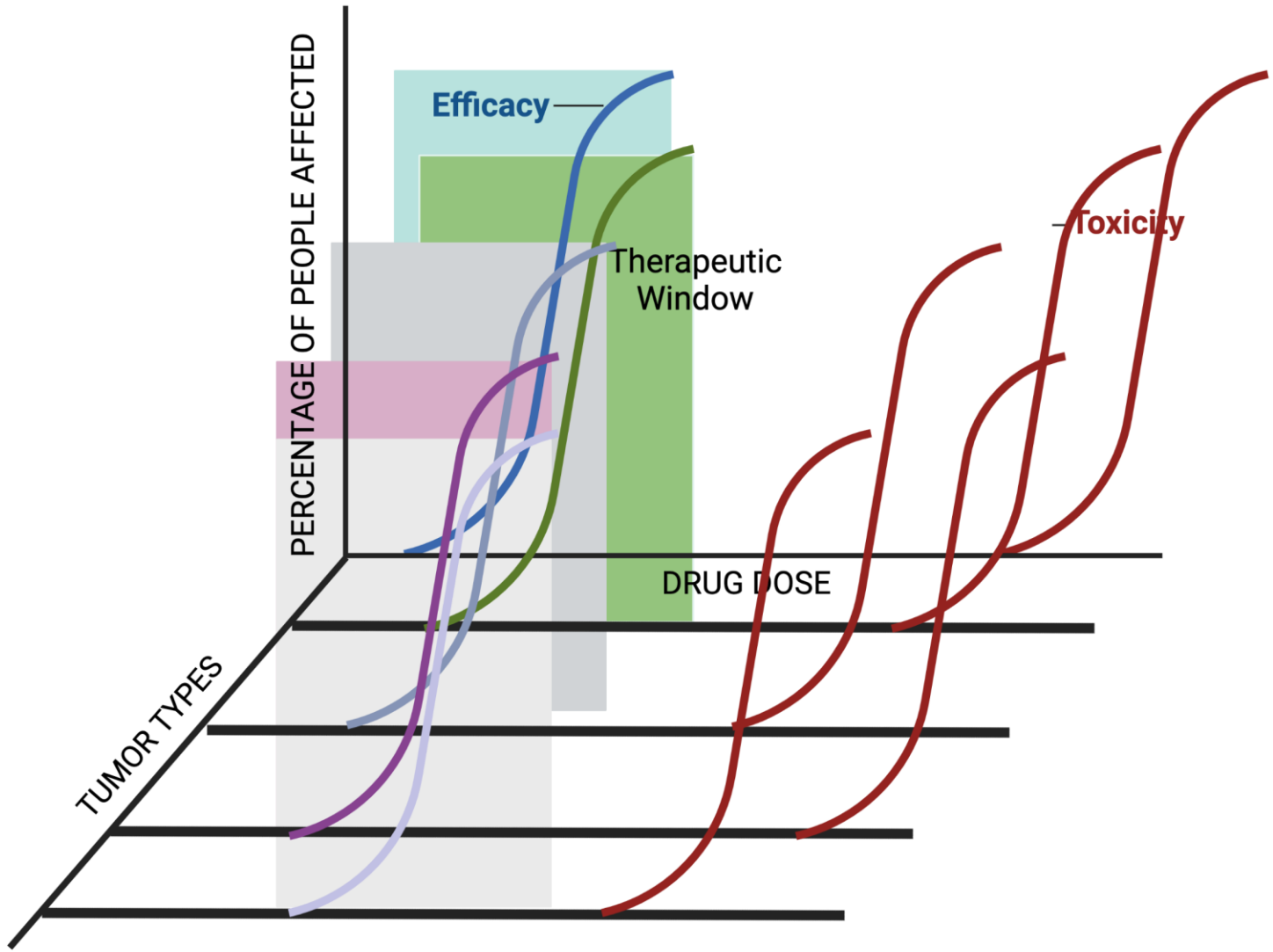

PERCENTAGE OF PEOPLE AFFECTED
Efficacy
Toxicity
Therapeutic Index
Therapeutic Window
DRUG DOSE


PERCENTAGE OF PEOPLE AFFECTED
Efficacy
Toxicity
Therapeutic Index
DRUG DOSE


PERCENTAGE OF PEOPLE AFFECTED
Efficacy
Toxicity
Therapeutic Index
DRUG DOSE


PERCENTAGE OF PEOPLE AFFECTED
Efficacy
Toxicity
Therapeutic Index
DRUG DOSE


PERCENTAGE OF PEOPLE AFFECTED
Efficacy
Toxicity
Therapeutic Window
Therapeutic Index
DRUG DOSE


PERCENTAGE OF PEOPLE AFFECTED
Efficacy
Therapeutic Window
Toxicity
DRUG DOSE
TUMOR TYPES

What Makes Nelmastobart Attractive?

- First-In-Class, A Novel Immune Checkpoint Inhibitor
- No Dose-Limiting Toxicity (DLT)
- BTN1A1 expression is mutually exclusive to PD-L1
- Opportunities for Expansion

First-In-Class:
A Novel Immune Checkpoint Inhibitor

Hallmarks of BTN1A1
Major Preclinical Discoveries

1. Discovered and proven as the immune checkpoint

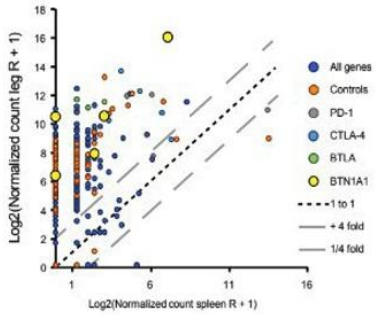
2. Inhibition of T cells' Proliferation and activation

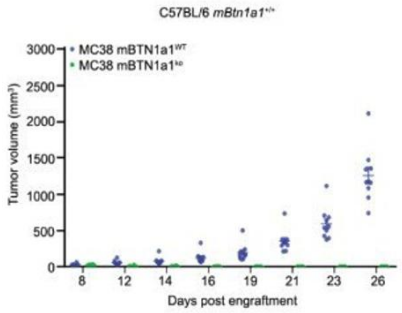
3. Inhibition of cancer cell's death by activated T cells

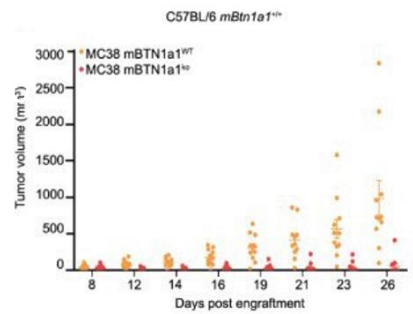
4. Mainly expressed in Cancer cells for its function

5. Exclusive expression to PD-L1

1.







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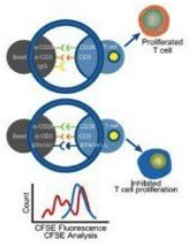

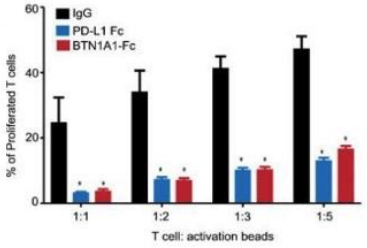

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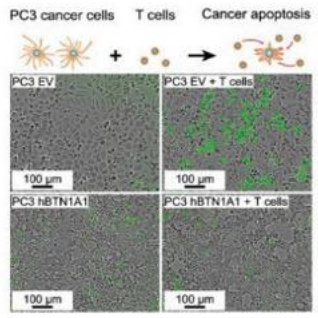

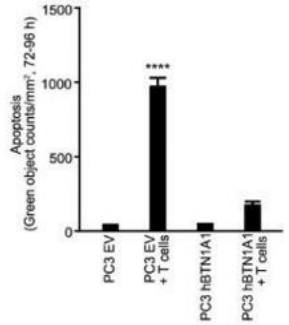

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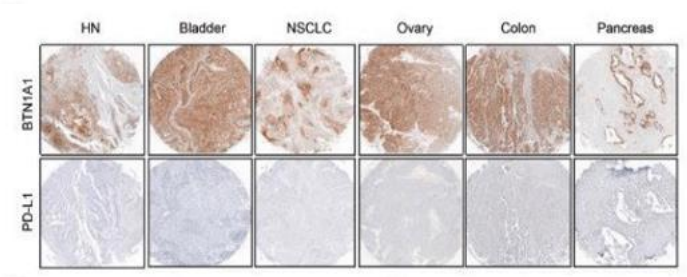

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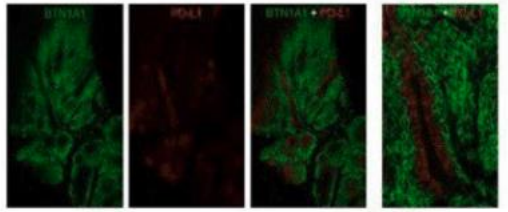
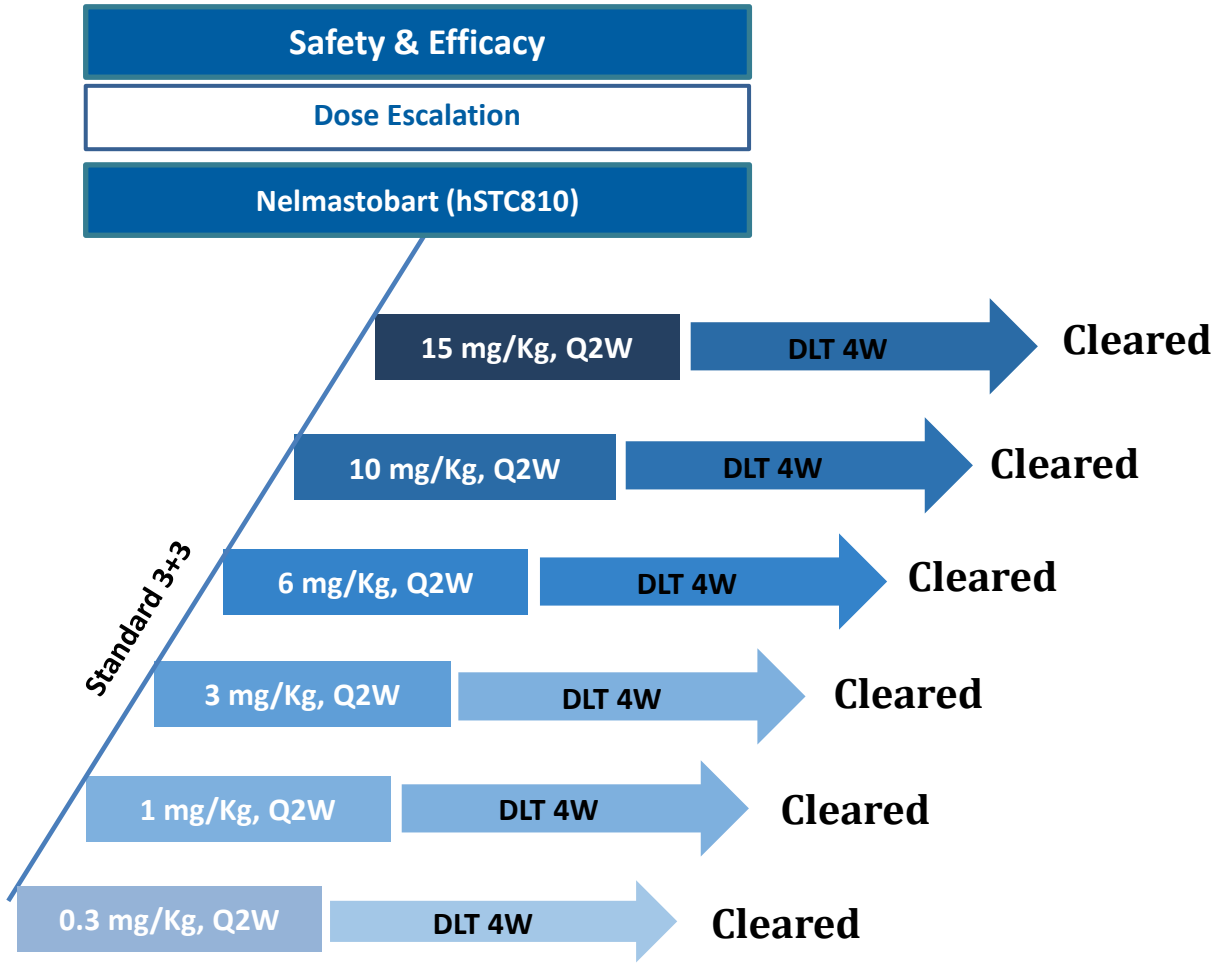


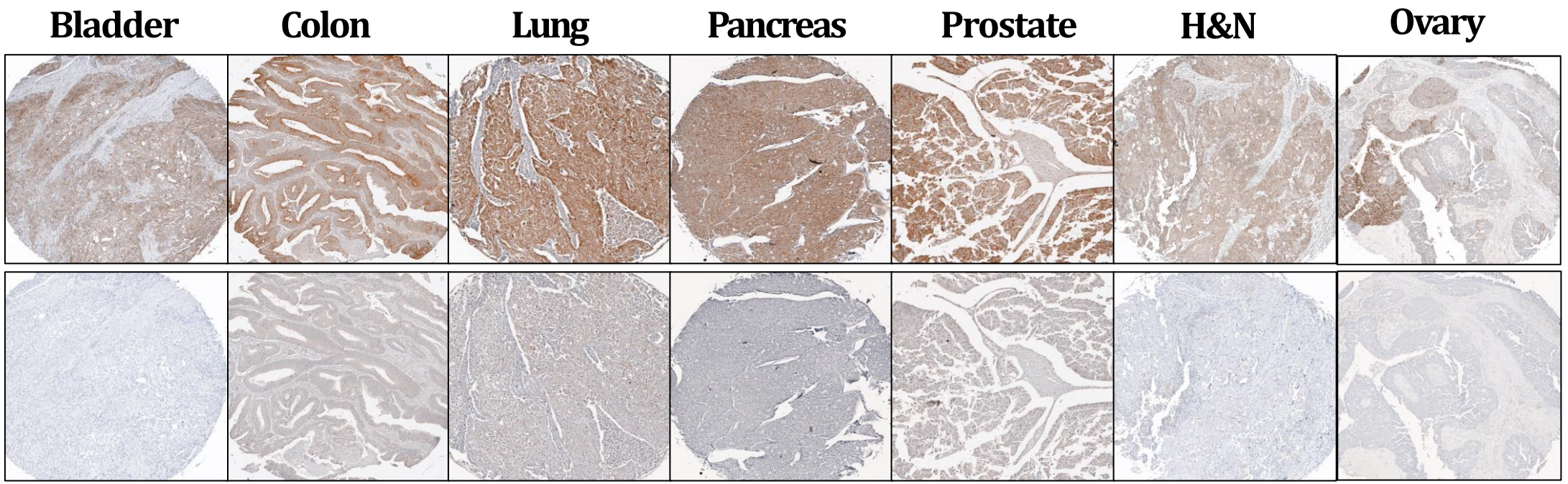
Decreasing Toxicity:
Maximum Tolerated Dose (MTD)



No DLTs across all 6 dose levels

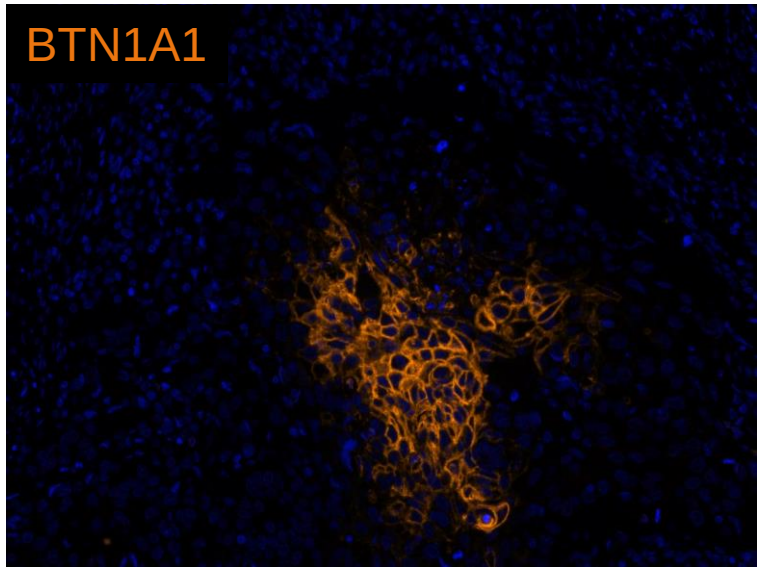
MTD is not reached

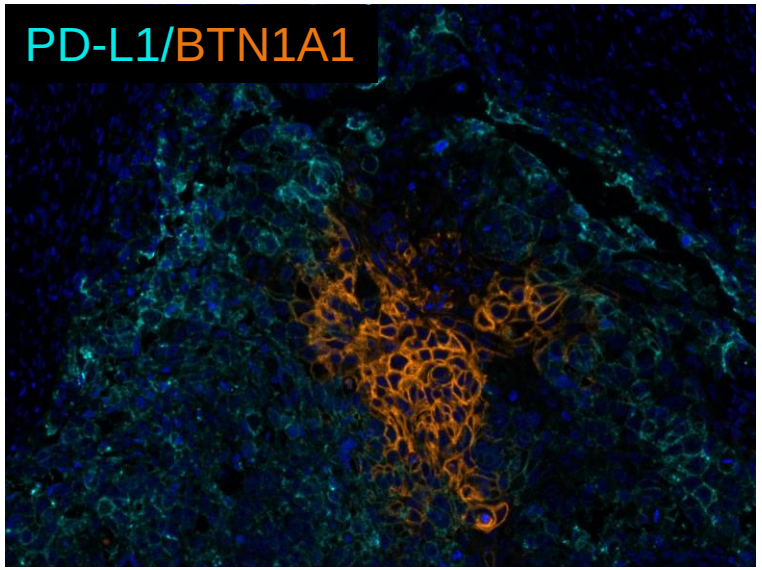
Increasing Efficacy:
Target Expression in a Variety of Solid Tumors

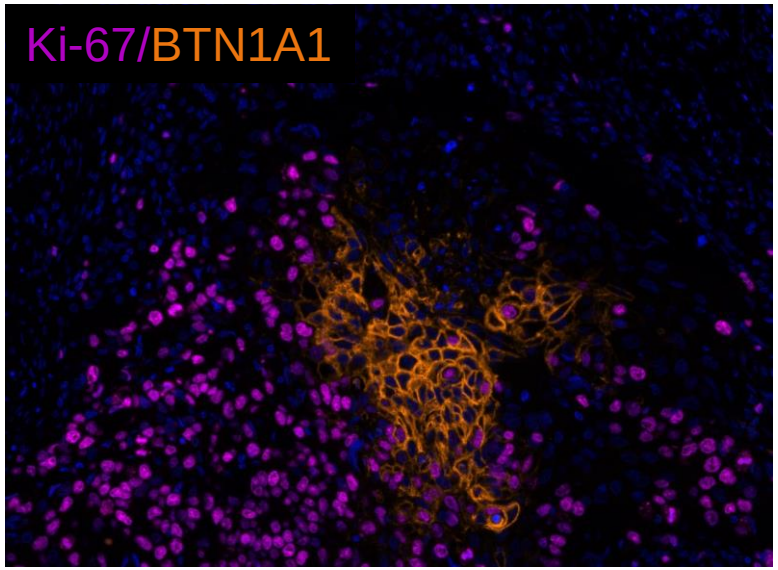


Pronounced and robust BTN1A1 expression can be seen in bladder, colon, lung, pancreas, prostate, H&N, ovarian, and other tumor tissues, while PD-L1 expression was low.

Mutually Exclusive Expression of BTN1A1 and PD-L1

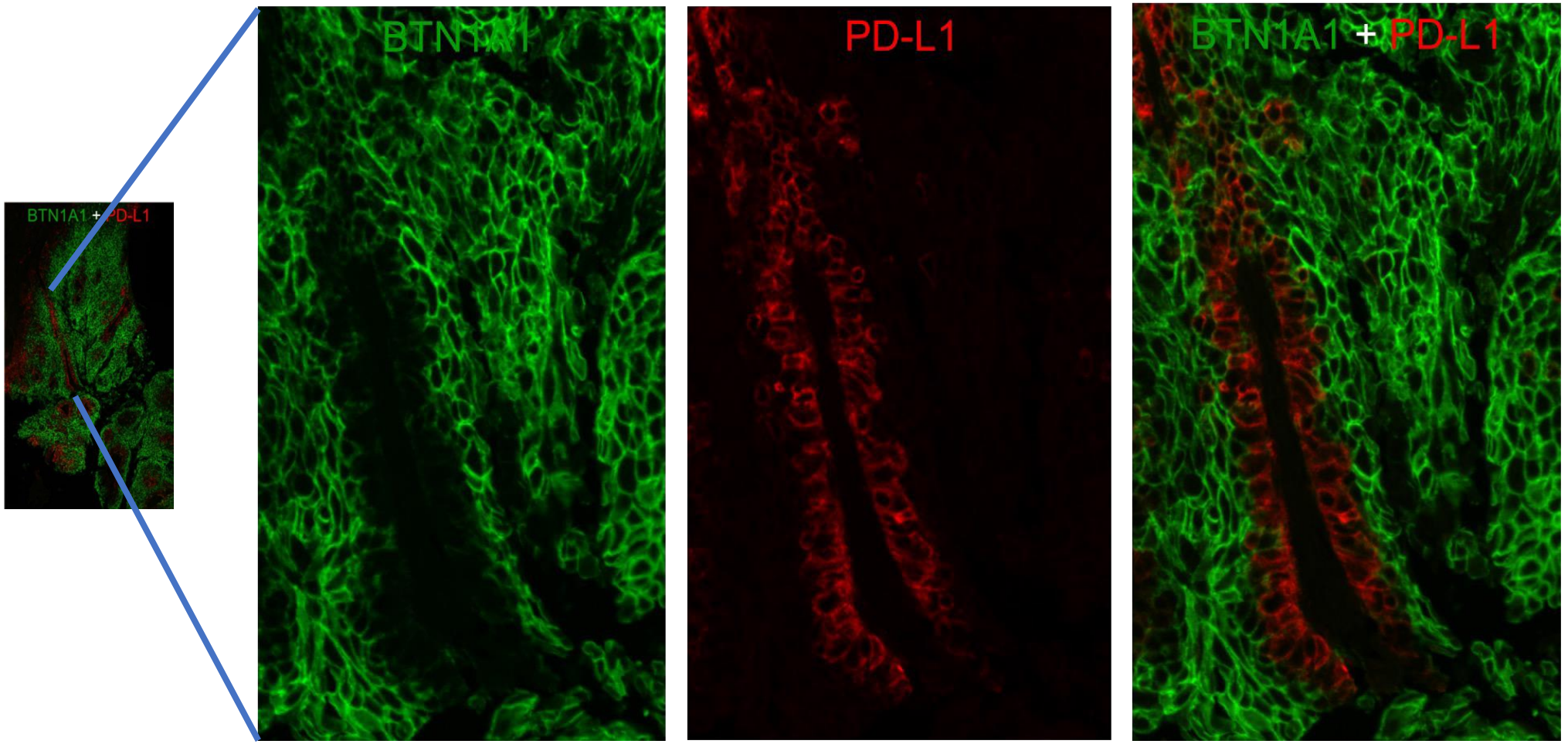






Simultaneous BTN1A1 and PD-L1 detection using OPAL staining show that these 2 proteins are mutually exclusive to one another

Mutually Exclusive Expression of BTN1A1 and PD-L1



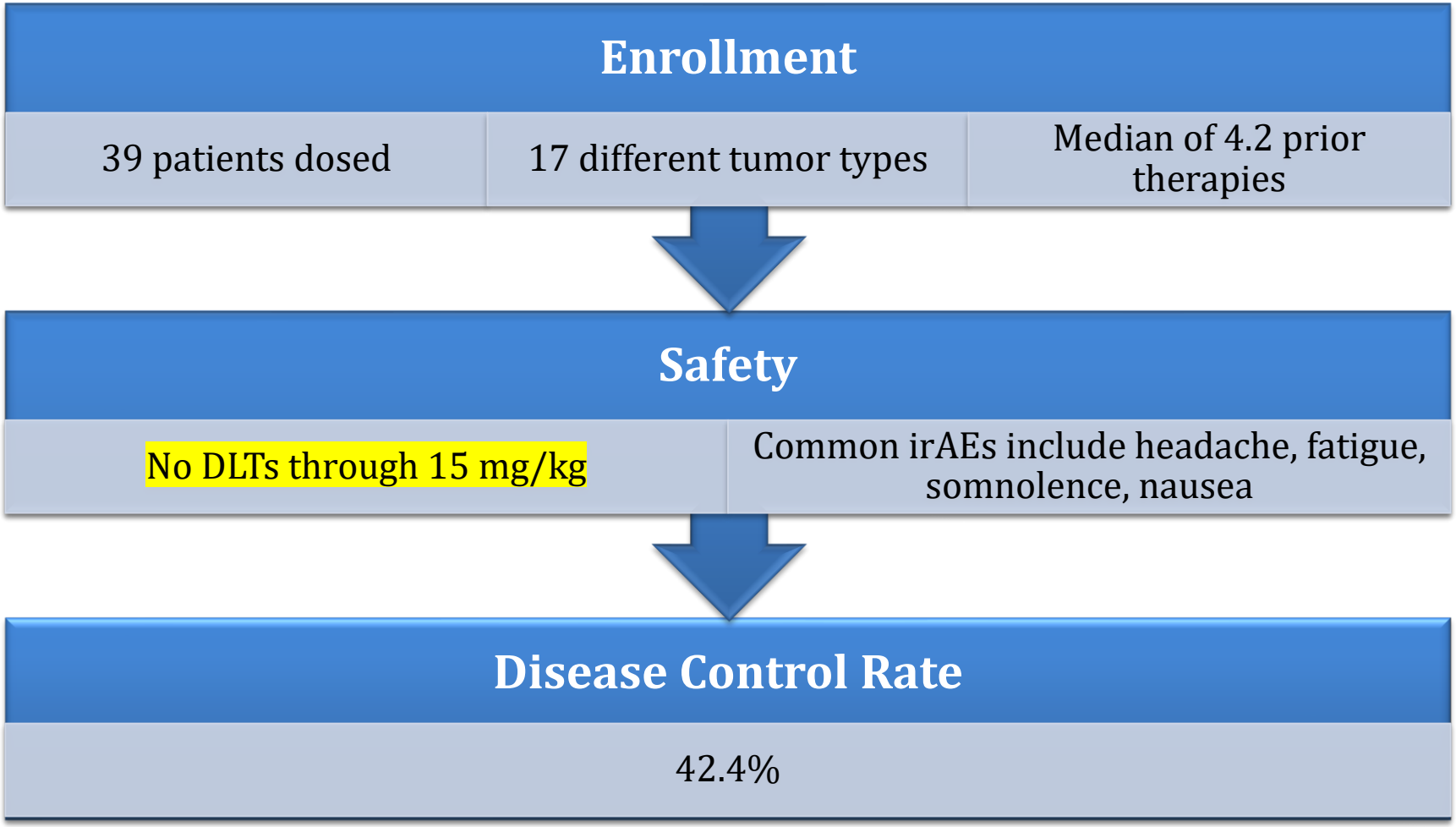
Simultaneous BTN1A1 and PD-L1 detection using OPAL multiplex staining show that these 2 proteins are never co-expressed by the same cell

BTN1A1 vs. PD-L1 Target Expression

Tissue		BTN1A1 expression	PD-L1 expression
NSCLC	Squamous	56.0 %	37.5 %
	Adenocarcinoma	30.0 %	-
SCLC		70 %	5 %
Bladder		75.0 %	7.5 %
Ovary		56.1 %	7.8 %
H&N		84.5 %	16.7 %
Esophageal, squamous		71.4 %	25.7 %
Urothelial		75.0 %	7.5 %
Melanoma		17.5 %	7.5 %
Liver		10.0 %	15.0%
Breast		63.2 %	5.9 %
Pancreas, adenocarcinoma		40.0 %	7.5 %

BTN1A1 expression in various solid tumors is mostly over 50%
while PD-L1 expression is mostly under 30%

Clinical Trial Update



Re-defining the Standards

Keytruda: FDA Approvals in Various Indications

Indication	Treatment	PFS	FDA Approval
Ovarian (Platinum-refractory)	Monotherapy	2.1 months	**Not Approved**
Lung (SCLC)	Combination therapy with chemo	4.5 months	**Not Approved**
Colon (MSI-H)	Monotherapy	16.5 months	**Approved**
Melanoma	Monotherapy	4.1 months	**Approved**
NSCLC	Monotherapy	5.4 months	**Approved**
	Combination therapy with chemo	8.8 months	**Approved**
SCCHN	Monotherapy	3.4 months	**Approved**
	Chemotherapy combination	4.9 months	**Approved**

Nelmastobart vs. Standard of Care

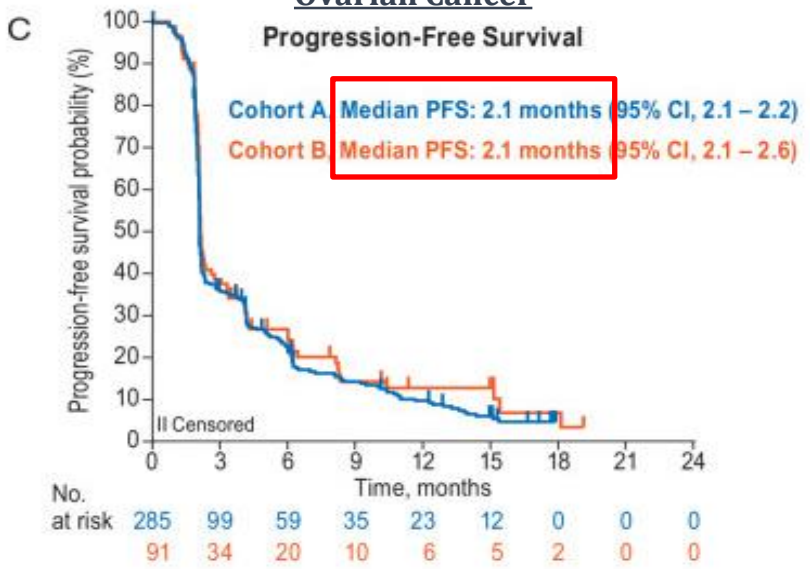
Indication	Standard of Care, Median PFS	Nelmastobart, Duration of treatment
Ovarian (Platinum-refractory)	8 weeks[1]	15 weeks
Lung (Refractory SCLC)	8 weeks[2]	14 weeks
Head & Neck	10 weeks[3]	18 weeks
Colon (MSS)	17.6 weeks[4]	25 weeks

1 Cancer Chemotherapy and Oncology (2019)
2 Journal of Oncology Practice (2018)
3 American Association for Cancer Research (2010)
4 JAMA Network Open (2022)

Closing the Gap:

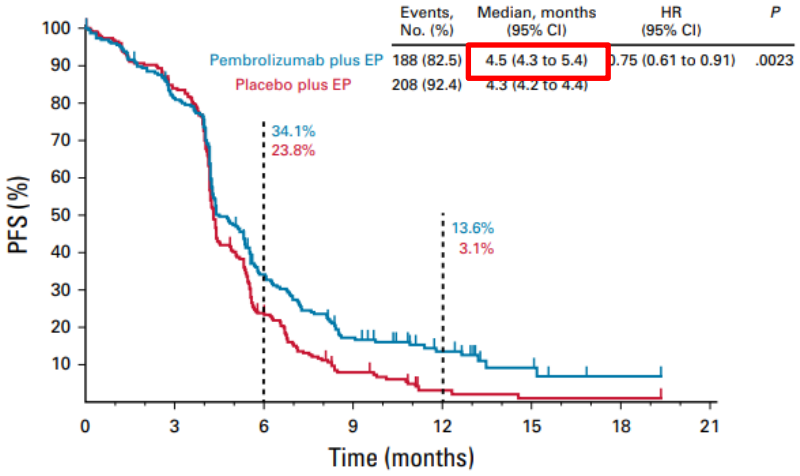
Unmet needs in Treatment of Advanced Solid Tumors

Ovarian Cancer



Ref: *Annals of Oncology (2019)*

SCLC



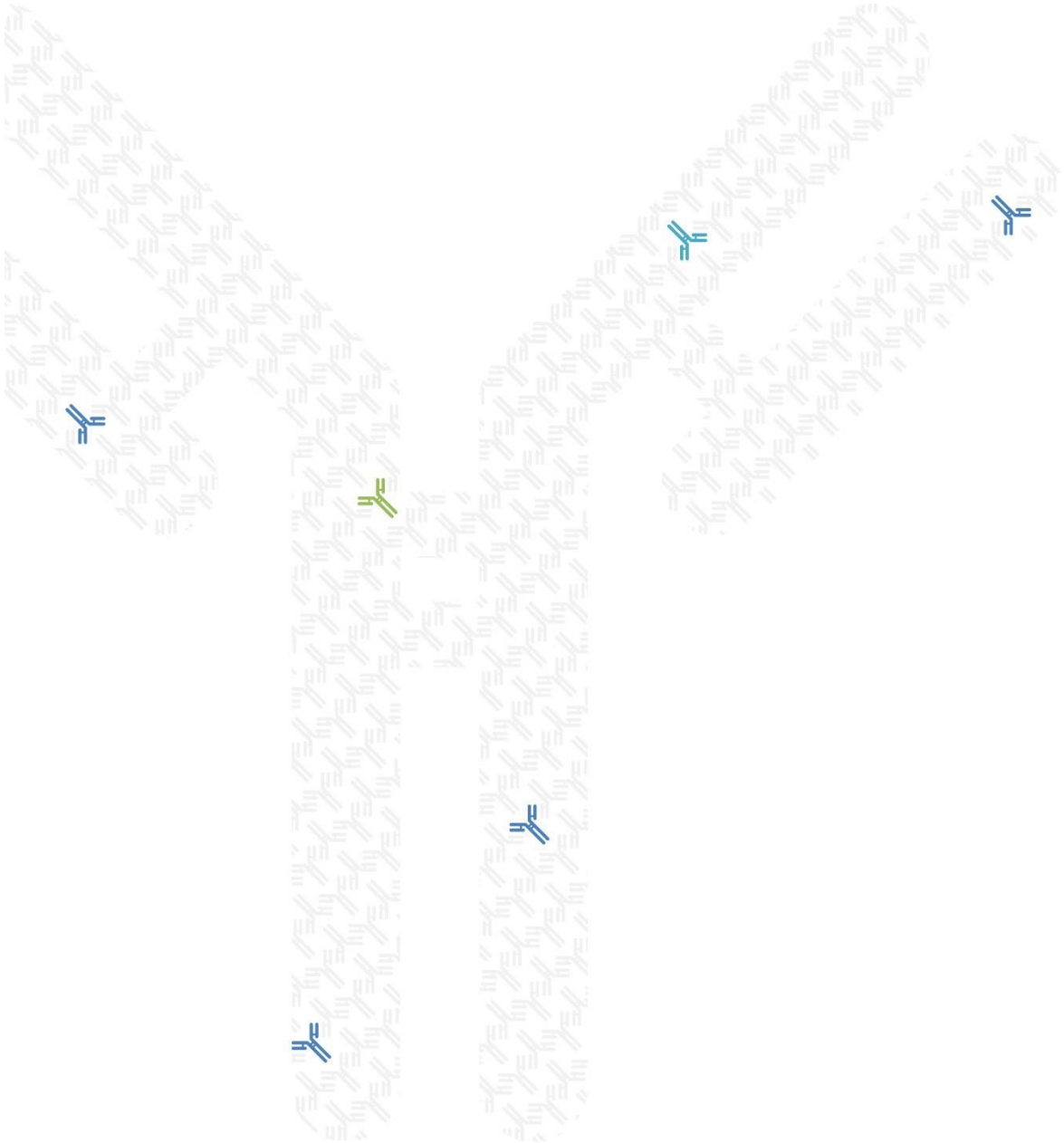
Ref: *Journal of Clinical Oncology (2020)*

Ovarian cancer and SCLC responses to Nelmastobart are on-going:

Ovarian Cancer → 4 months

SCLC → 3.5 months

Q & A :
Next Steps, Opportunities for Collaboration



Thank You

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