



Targeting tumor suppressor loss
to unmask vulnerabilities in cancer
for the next generation of precision medicines

Corporate Overview
May 2024

Disclaimer and Safe Harbor Statement

Certain statements in this presentation may be considered forward-looking statements. Forward-looking statements generally relate to future events, Tango's future financial and operating performance, goals, expectations, beliefs, development plans, as well as development and clinical trial objectives for Tango's product pipeline (as individual therapies and combination therapies with other party's drugs). In some cases, you can identify forward-looking statements by terminology such as "may", "should", "expect", "intend", "will", "path", "achievable", "milestones", "goal", "forecast", "estimate", "potential", "anticipate", "believe", "predict", or "continue", or the negatives of these terms or variations of them or similar terminology. For example, express or implied statements concerning the following include or constitute forward-looking statements: Company has a cash runway into 2027 (including for POC readouts for all three clinical programs); dose escalation is on-going in the TNG462 clinical trial and the TNG260 trial which is being evaluated in combination with pembrolizumab; the Company expects to provide TNG908 and TNG462 clinical trial data in the second half of 2024; dose expansion on-going for TNG908; does expansion planned for 2Q 2024 for TNG462; MAT2A inhibitors are indirect PRMT5 inhibitors and may add benefit in MTAP-del cancers in combination with TNG908 and TNG462; the dosing in cohorts 1 and 2 of the TNG908 clinical trial not yet within the predicted efficacious range; Company has a state-of-the-art discovery platform supporting a sustainable pipeline of novel precision oncology targets; Company has three on-going oncology clinical trials; TNG260 clinical exposures within the predicted efficacious dose range are well-tolerated; the anticipated milestones for the Company's drug programs, including the timing for patient dosing and dose escalation data and clinical updates, timing of initial and interim (and final) safety and efficacy or clinical activity data and results from clinical trial(s), the timing of first-in-human clinical trials, the timing of IND-enabling studies, the timing of clinical trial initiation; the potential for a large patient population to be treated with Tango's PRMT5 inhibitors; Tango has a sustainable pipeline of novel precision oncology targets; the Company's lead program is a potentially first-in-class PRMT5 inhibitor that is synthetic lethal with MTAP deletion; TNG462 PK profile optimized for maximal target coverage; predictions regarding bone marrow suppression with use of PRMT5 inhibitors; there is a clear path to clinical POC for PRMT5 inhibitor in MTAP-null solid tumors with potential for histology-agnostic registration; potential combination strategies for PRMT5; potential for histology-agnostic registration for PRMT5 inhibitor with broad based activity across tumor types; the Company will be pursuing novel combination therapies with inhibitors that have a complementary mechanism of action; TNG908 expansion cohorts provide optionality for multiple registration strategies; TNG908 expected to be brain penetrant in clinical study; TNG462 is potential best-in-class PRMT5 inhibitor (and has potential for broader and deeper clinical activity and is expected to have an increased therapeutic index and efficacy and extended target coverage); the development plans for the PRMT5 franchise (including future clinical trials); future clinical trial designs; TNG260 future clinical trials strategy and implementation; the significant patient opportunities for the Company's pipeline therapies; Tango has sufficient cash balance to fund operations into 2027 (and is sufficient to achieve multiple projected key milestones); the Company's key future milestones; the anticipated benefits of synthetic lethal drugs; planned expansion cohort of the TNG908 phase 1/2 clinical trial for glioblastomas; and the anticipated benefits of future product candidates including those identified in the future through the Tango discovery platform. Such forward-looking statements are subject to risks, uncertainties, and other factors which could cause actual results to differ materially from those expressed or implied by such forward looking statements. These forward-looking statements are based upon estimates and assumptions that, while considered reasonable by Tango and its management, are inherently uncertain. Drug development, clinical trials and commercialization involve a high degree of risk, and only a small number of research and development programs result in commercialization of a product. New risks and uncertainties may emerge from time to time, and it is not possible to predict all risks and uncertainties. Factors that may cause actual results to differ materially from current expectations include, but are not limited to: Tango has a limited operating history and has not generated any revenue to date from drug sales, and may never become profitable (and may utilize cash resources more quickly than anticipated and may exhaust cash resources prior to 2027 or prior to POC readouts); Tango has limited experience with conducting clinical trials (and will rely on a third party to operate its clinical trials) and may not be able to commence any clinical trial, enroll and dose patients when expected and may not generate results in the anticipated timeframe (or at all); dosing (including dose expansion) in clinical trials may need to be delayed or may be stopped for various reasons, including due to any potential issues at the site, safety issues or supply disruptions; any significant changes required to be made to the IND application or protocol could significantly delay on-going clinical trials; the benefits of Tango pipeline products (stand-alone and as potential combination therapies) that are seen in pre-clinical experiments may not be present in clinical trials or in use commercially or may not be safe and/or effective in humans (and Tango or a third-party may not be able to obtain approval or commercial sales of any stand-alone or combination therapies); Tango has incurred significant operating losses and anticipates continued losses for the foreseeable future; Tango will need to raise capital in the future and if it is unable to raise capital when needed or on attractive terms, the Company would be forced to delay, scale back or discontinue some development programs or future commercialization efforts; Tango may be unable to advance the preclinical development programs into and through the clinic for safety or efficacy reasons or experience significant delays in doing so as a result of factors beyond Tango's control; Tango's approach to the discovery and development of product candidates is novel and unproven, which makes it difficult to predict the time, cost of development, and likelihood of successfully developing any products; Tango may not identify or discover development candidates (including next generation products) or may expend a portion of its limited resources to pursue a particular product candidate or indications and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success; delays or difficulties in the initiation, enrollment or dosing of patients in clinical trials could delay or prevent receipt of regulatory approvals or reporting trial results; our product candidates may cause adverse or other undesirable side effects that could, among other things, delay or prevent regulatory approval; our dependence on third parties for conducting clinical trials and producing drug product (including the potential impact of the BIOSECURE Act on our supplier of drug substance); our ability to obtain and maintain patent and other intellectual property protection for our technology and product candidates or the scope of intellectual property protection obtained is not sufficiently broad; and delays and other impacts on product development and clinical trials from the public health events. Additional information concerning risks, uncertainties and assumptions can be found in Tango's filings with the SEC, including the risk factors referenced in Tango's Annual Report on Form 10-K for the year ended December 31, 2023, as may be supplemented and/or modified by its most recent Quarterly Report on Form 10-Q. You should not place undue reliance on forward-looking statements in this presentation, which speak only as of the date they are made and are qualified in their entirety by reference to the cautionary statements herein. Tango specifically disclaims any duty to update these forward-looking statements.

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COMPANY OVERVIEW

Tango Therapeutics



State-of-the-art discovery platform supporting a sustainable pipeline of novel precision oncology targets
Gilead partnership to discover and develop up to 15 targeted immune evasion targets



Three ongoing precision oncology clinical trials

- Two PRMT5 inhibitors addressing large patient populations in multiple MTAP-del tumor types
 - TNG908 clinical data on GBM and solid tumors in 2H 2024
 - TNG462 clinical data in 2H 2024
 - TNG260 (CoRESTi) to restore α -PD-L1 sensitivity in STK11-mut lung and other cancers
-



Cash runway into 2027 includes POC readouts for all three clinical programs

A sustainable pipeline of novel precision oncology targets

PROGRAM	PATIENT SELECTION	DISCOVERY	IND-ENABLING	CLINICAL TRIALS		STATUS
				Phase 1/2	Phase 3	
PRMT5 TNG908	MTAP-del cancers	[Progress bar]		[Progress bar]		Dose expansion ongoing, clinical data 2H 2024
PRMT5 TNG462		[Progress bar]		[Progress bar]		Dose expansion planned 2Q 2024, clinical data 2H 2024
CoREST TNG260	STK11-mut cancers	[Progress bar]		[Progress bar]		Dose escalation ongoing
Multiple synthetic lethal targets	Tumor suppressor gene loss	[Progress bar]		[Progress bar]		

Gilead optioned and licensed targets not listed

A strong strategic partnership with Gilead

SCOPE	<ul style="list-style-type: none">• 15 validated immune evasion targets• Three targets licensed, two optioned to date
RESEARCH AND DEVELOPMENT	<ul style="list-style-type: none">• Target discovery and validation at Tango with option to extend to clinical POC• Gilead to lead post-POC development and commercialization
RIGHTS	<ul style="list-style-type: none">• Full rights to TNG260 and all cell autonomous targets not associated with immune evasion retained by Tango
SHARED ECONOMICS	<ul style="list-style-type: none">• Option to co-develop/co-promote up to five programs• 50/50 US profit/loss sharing on co-developed programs• Low double-digit royalties on all other programs
TERMS	<ul style="list-style-type: none">• \$175 million upfront• \$20 million equity• Up to \$110M to clinical POC, \$410M per program and up to \$6 billion in milestones

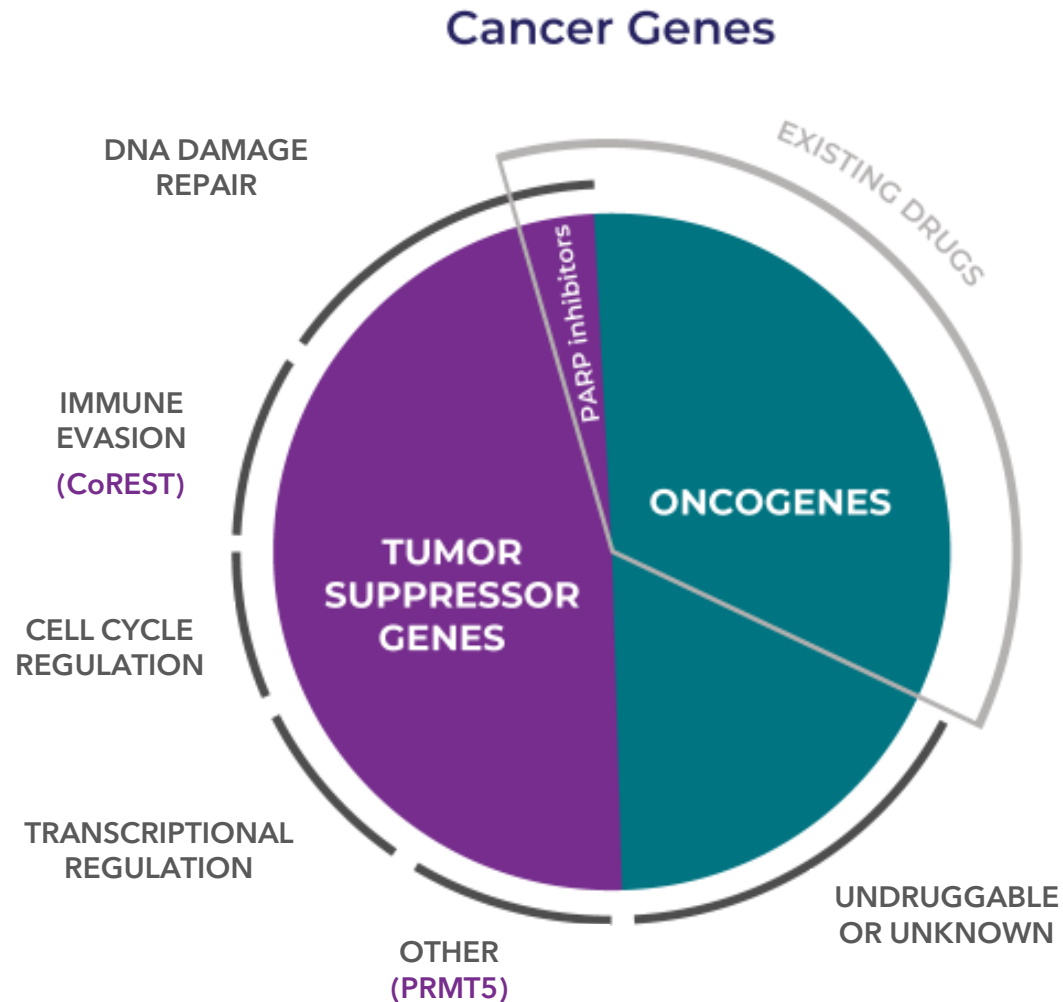


SYNTHETIC LETHALITY FOR CANCER THERAPEUTICS

Most cancer targets are not drugged yet

TUMOR SUPPRESSOR GENES

- Important drivers of cancer inactivated or deleted in almost all human cancers
- Not directly druggable



SYNTHETIC LETHALITY

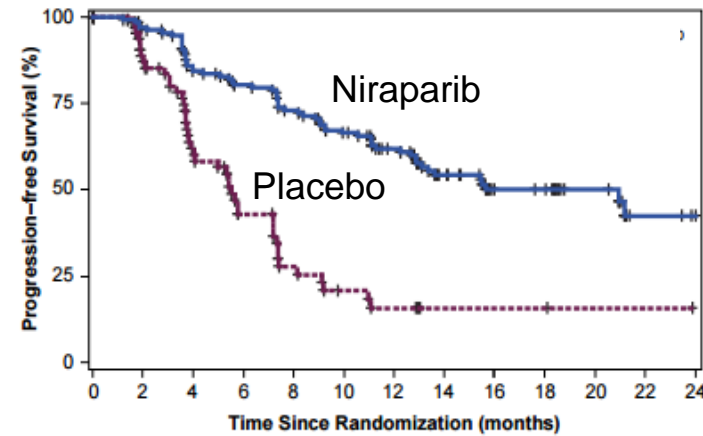
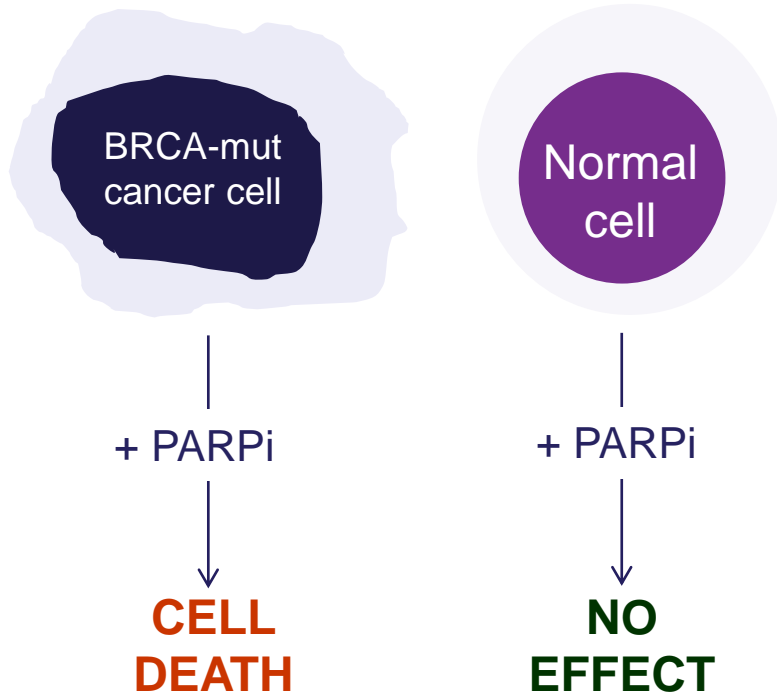
Primary approach to targeting tumor suppressor gene loss

CRISPR TECHNOLOGY

Essential for large scale synthetic lethal discovery efforts

PARP is the first clinically validated synthetic lethal drug target

BRCA1/2 mutation and PARP inhibition are a synthetic lethal pair



- PARP inhibitors are approved in BRCA-mutant breast, ovarian, pancreatic and prostate cancer
- Synthetic lethal drugs inherently have a wide therapeutic index
- Multiple analyses suggest hundreds of synthetic lethal pairs exist in human cancer

A robust synthetic lethal target discovery platform drives our precision medicine approach

Cell-autonomous
target discovery

CELL-BASED
CRISPR
SCREENS

Immune evasion
target discovery

IN VIVO
CRISPR
SCREENS

TANDEM

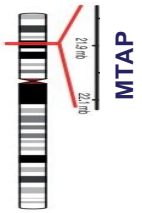
Computational
target discovery

- Powerful CRISPR vector systems yield precision oncology targets with inherent patient selection strategies
- Custom libraries drive efficient discovery of novel targets
- TANDEM integrates large internal genetic perturbation data sets with massive public data sets

TNG908 and TNG462

PRMT5 inhibition in MTAP-deleted cancers

Leveraging synthetic lethality to develop PRMT5 inhibitors for a large patient population

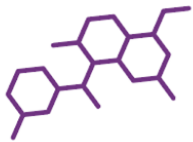


TNG908

MTA-cooperative, brain penetrant PRMT5 inhibitor that is synthetic lethal with MTAP deletion

TNG462

Next-generation MTA-cooperative PRMT5 inhibitor with enhanced potency and MTAP-selectivity



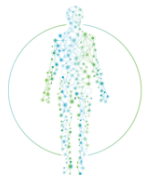
DIFFERENTIATED MECHANISM

Novel MTA-cooperative mechanism highly selective for cancer cells with MTAP deletion with a large therapeutic index



LARGE OPPORTUNITY FOR PATIENTS

10-15% of all human cancers have MTAP deletion - one of the largest precision oncology patient populations



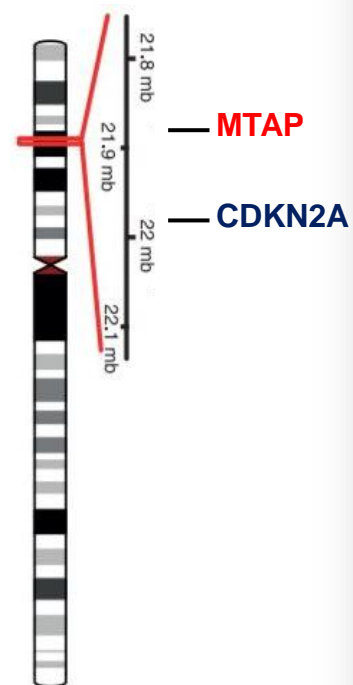
STATUS

TNG908 dose expansion ongoing, clinical data in 2H 2024

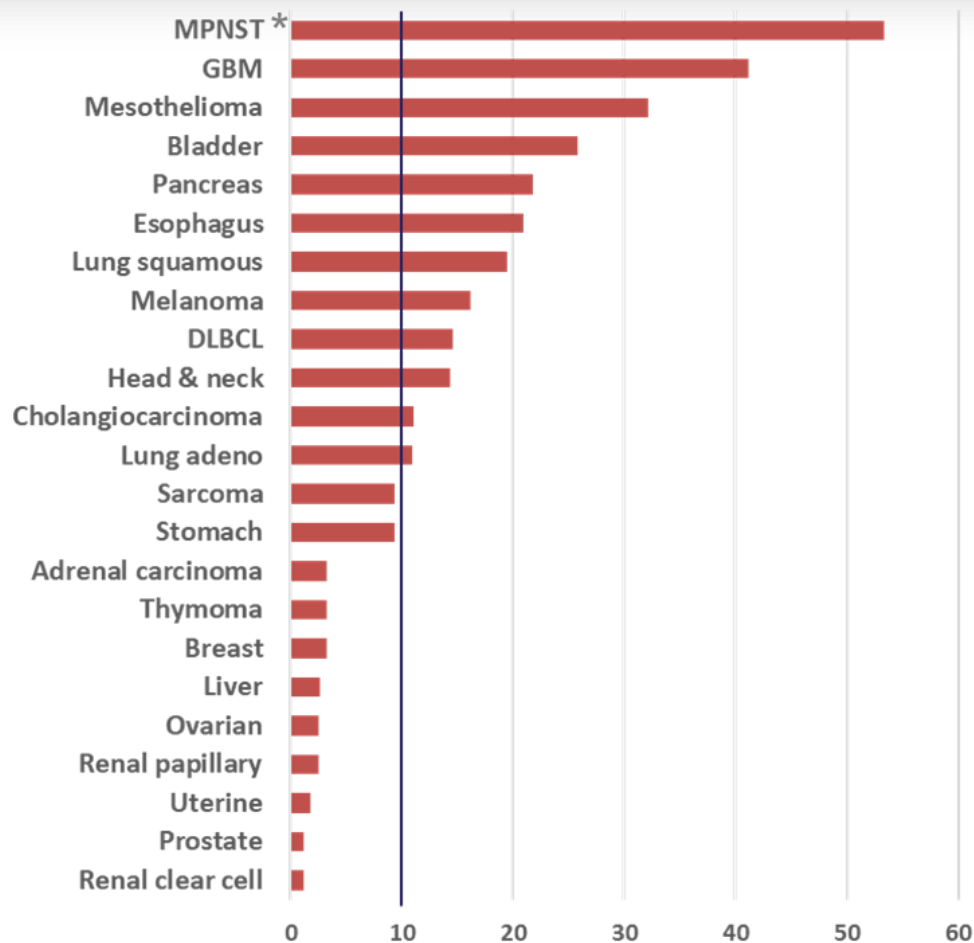
TNG462 dose expansion planned 2Q 2024, clinical data 2H 2024

Investing in our PRMT5 franchise with TNG908 and TNG462

Chromosome 9



MTAP homozygous deletion frequency

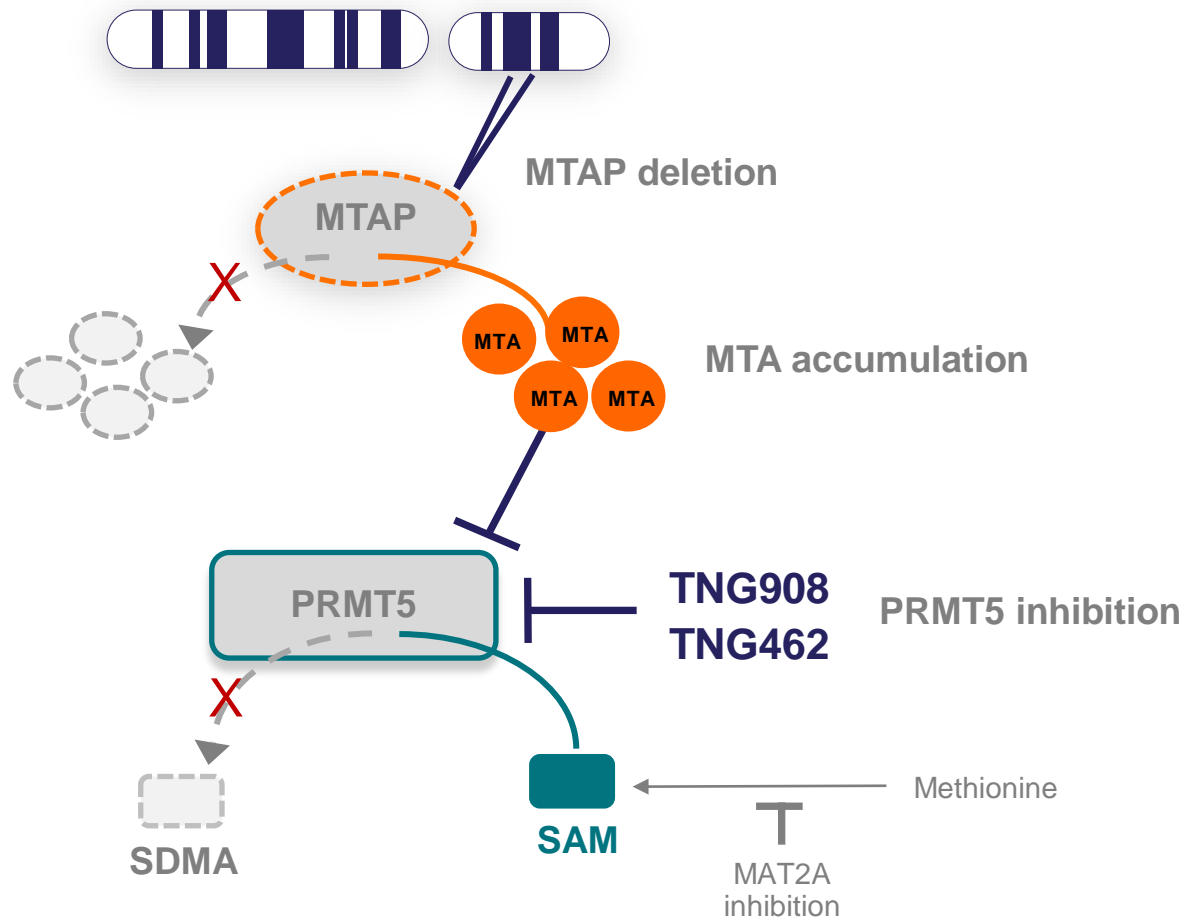


10-15% of all human cancers are MTAP-deleted

- MTAP is co-deleted with CDKN2A
- Clear path to clinical POC in MTAP-null solid tumors with potential for histology-agnostic registration
- TNG908 is brain penetrant thus potentially active in GBM patients
- TNG462 is ~30X more potent than TNG908 and 45X selective for MTAP deletion but not brain penetrant

PRMT5 and MTAP are a synthetic lethal pair

Cancers with MTAP deletion are more vulnerable to PRMT5 inhibition than normal cells

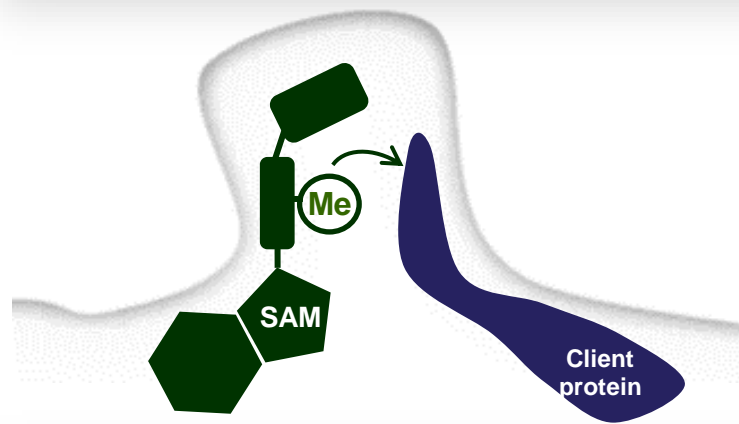


Mechanism of action

- MTAP deletion causes MTA to accumulate
- MTA binds to and inhibits PRMT5
- MTA-cooperative PRMT5 inhibitors selectively bind to the PRMT5-MTA complex
- TNG908 and TNG462 can fully inhibit PRMT5 activity in MTAP-deleted cancer cells while sparing normal cells
- TNG908 MTA-cooperative proof-of-mechanism demonstrated in phase 1 update

TNG908 and TNG462 are synthetic lethal MTA-cooperative PRMT5 inhibitors

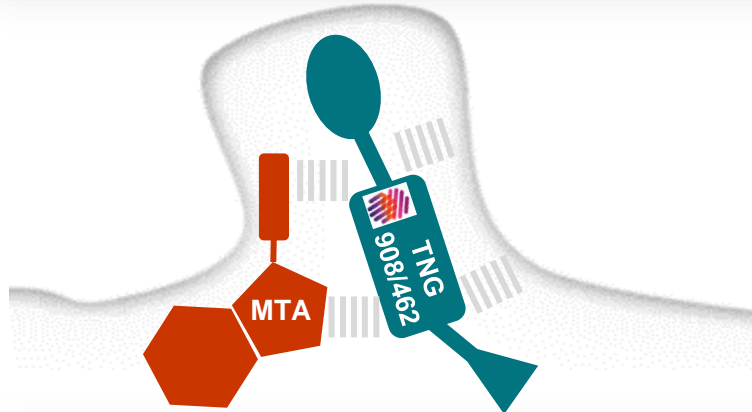
Normal cells



Active PRMT5

- Active SAM-PRMT5 complexes are predominant in normal cells
- Non-MTA cooperative PRMT5 inhibitors are equally cytotoxic in normal and MTAP-deleted cells

MTAP-deleted cancer cells



Inactive PRMT5

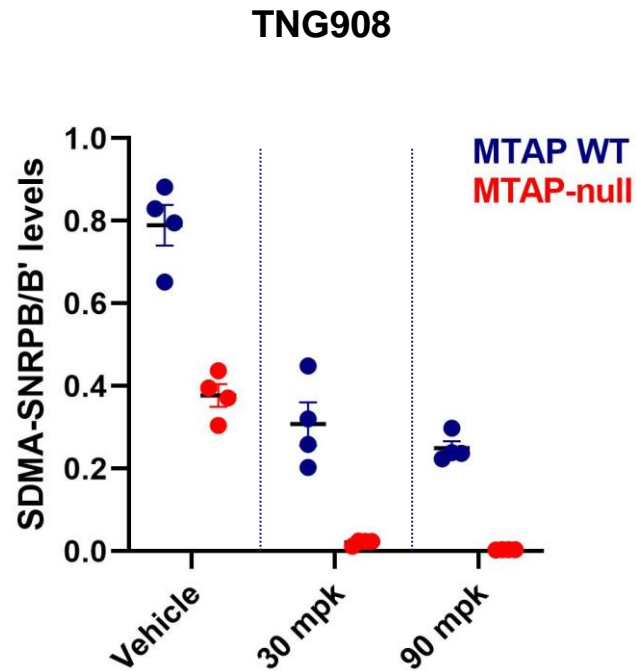
- Inactive MTA-PRMT5 complexes accumulate in MTAP-deleted cancer cells
- MTA-cooperative PRMT5 inhibitors preferentially kill MTAP-deleted cells

Key points

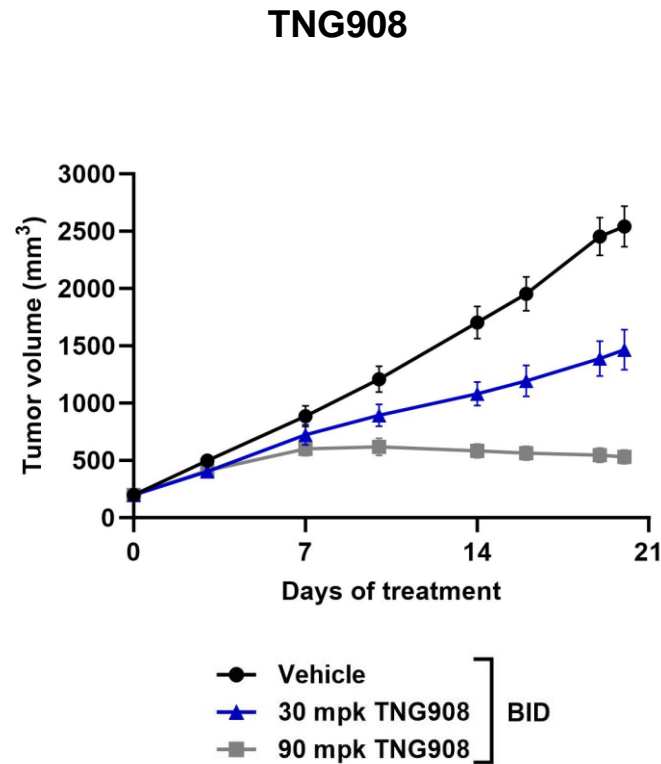
- TNG908 and TNG462 are designed to kill MTAP-deleted cancer cells while sparing normal cells
- TNG908 and TNG462 selectively bind to PRMT5-MTA complexes and lock them into an inactive state

Deep suppression of SDMA signal is necessary but not sufficient to drive tumor regressions

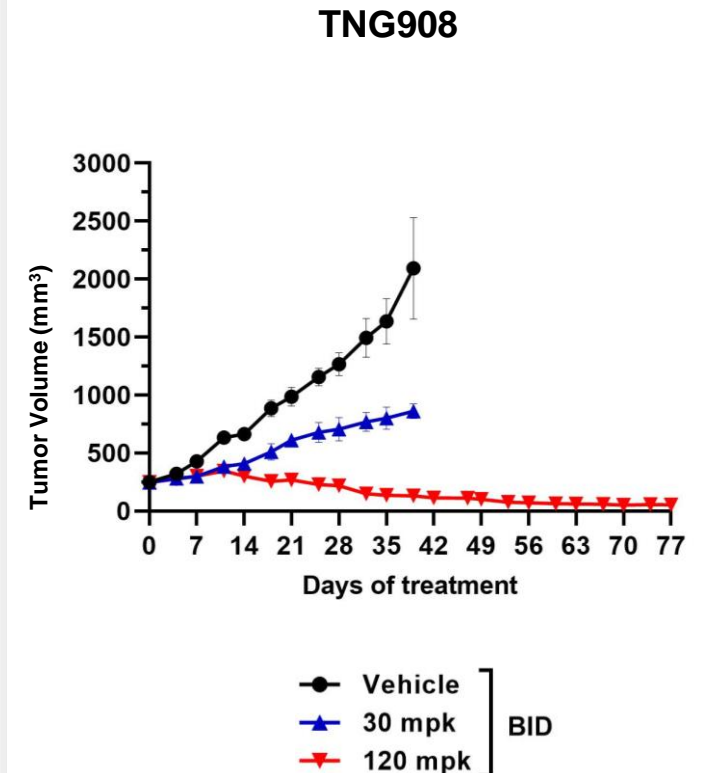
HCT116 MTAP-null isogenic CDX



HCT116 (colon cancer) MTAP-null CDX



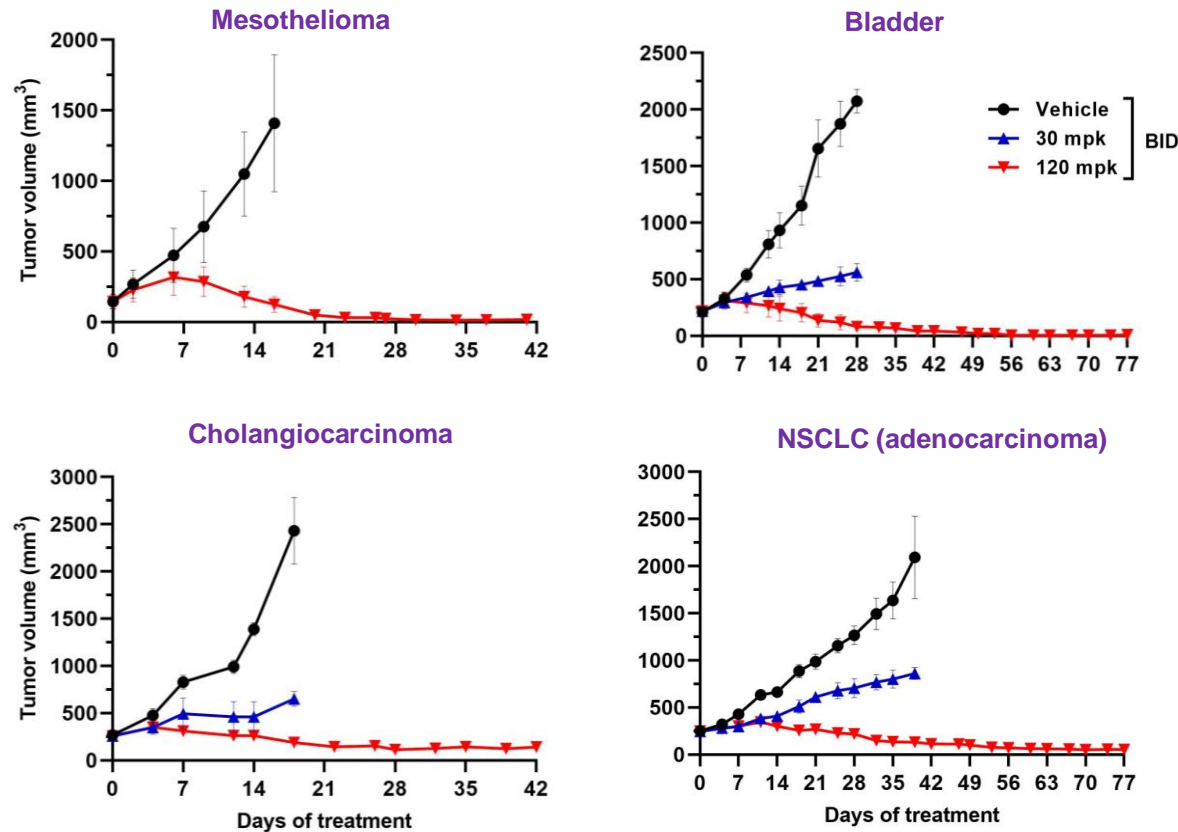
NSCLC (adenocarcinoma) MTAP-null PDX



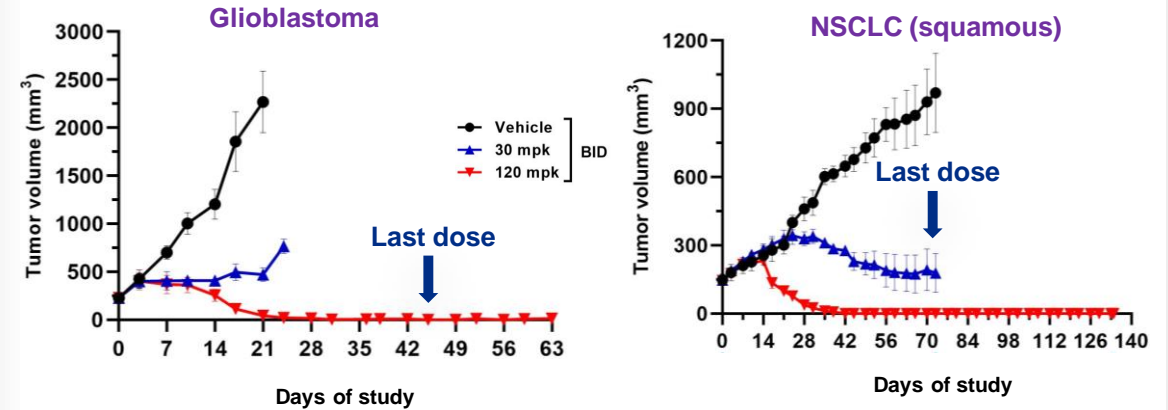
TNG908 drives regressions in MTAP-null xenografts across lineages

TNG908 IC50 110 nM, 15X selectivity for MTAP deletion

Continuous TNG908 treatment MTAP-null PDX models



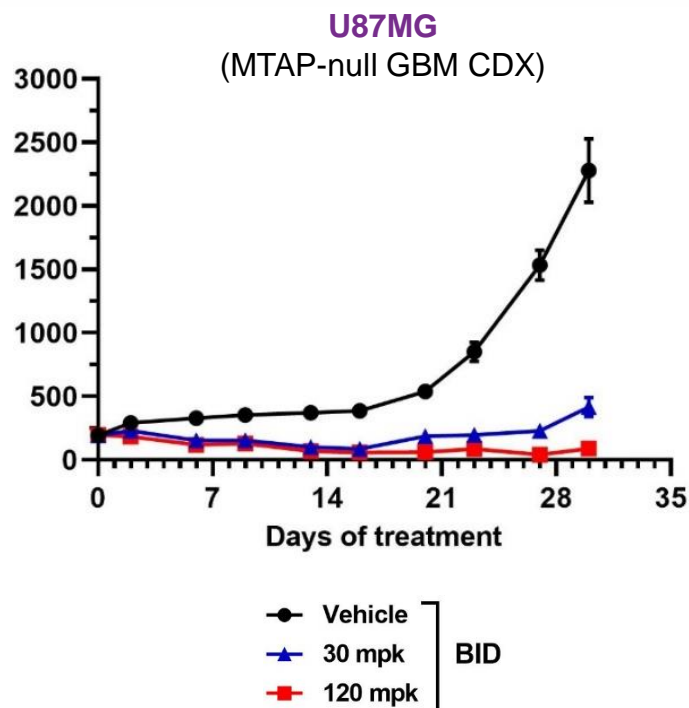
Sustained response after completion of dosing MTAP-null PDX models



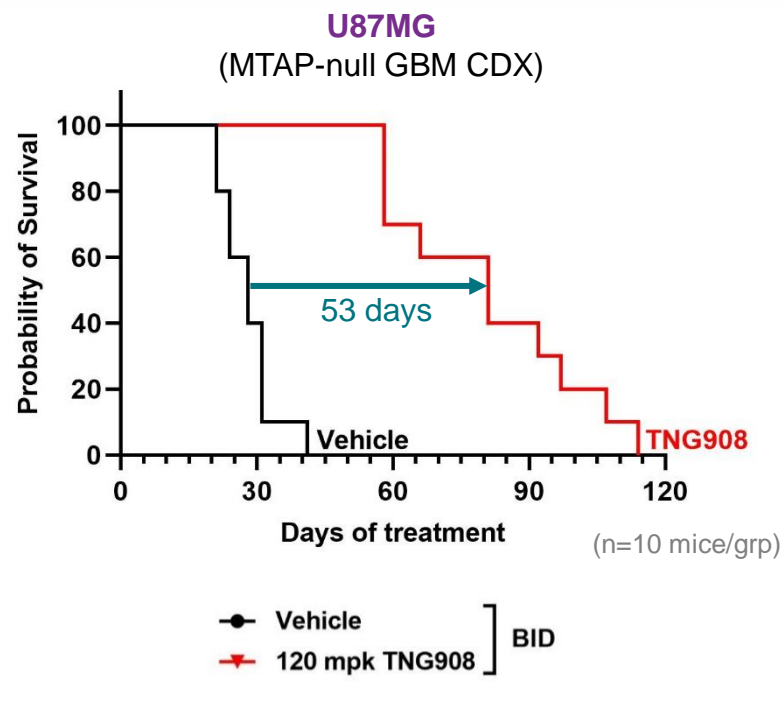
61/62 xenografts are sensitive to TNG908 with regression in 30%, no histology bias

TNG908 is more effective than standard of care in an orthotopic glioblastoma model

TNG908 drives deep regression in a subcutaneous glioblastoma model



TNG908 drives survival benefit in an orthotopic glioblastoma model



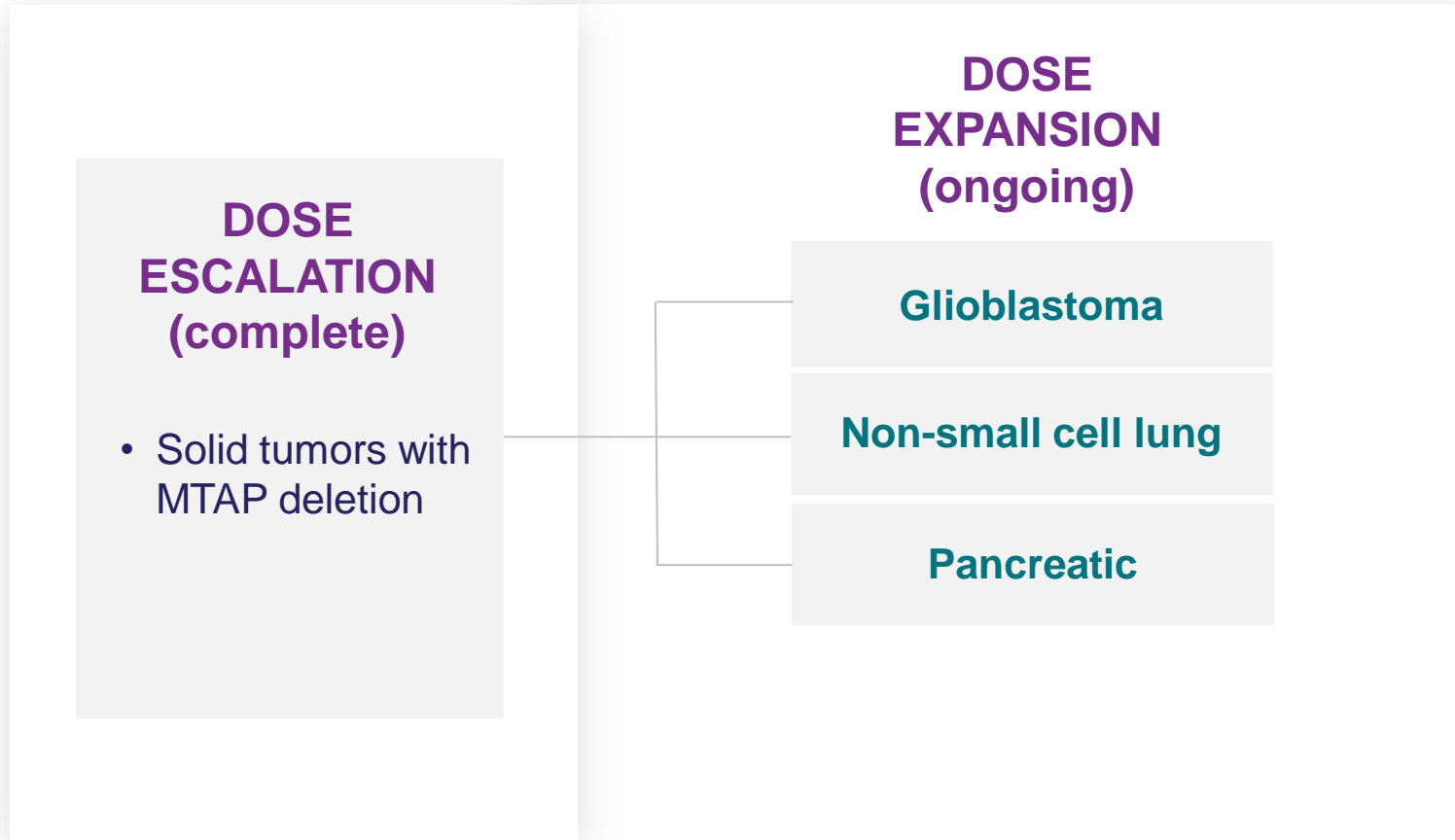
Reported survival benefit

- Avastin 37 days
- temozolomide 23 days

Summary

- TNG908 free exposure is equivalent in non-human primate brain (CSF) and plasma
- TNG908 exposure in rodent brain is ~15% of plasma

TNG908: Efficient trial design to evaluate efficacy in multiple indications

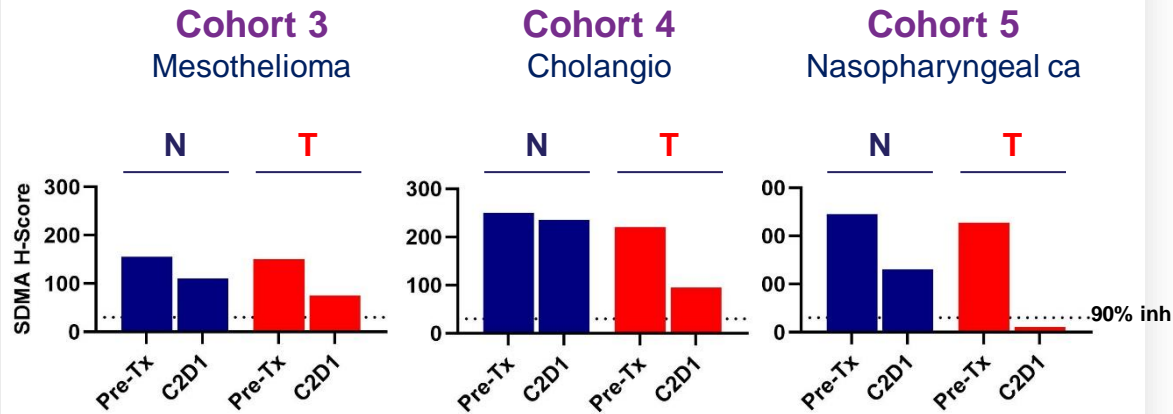


PHASE 1/2 STUDY

- ~10-15% of all human cancers are MTAP-del
- Safety, PK/PD and efficacy as primary endpoints
- Dose expansion ongoing at 600 mg BID. Clinical data 2H 2024
- FDA Fast Track designation
- FDA Orphan Drug Designation for malignant glioma, including glioblastoma

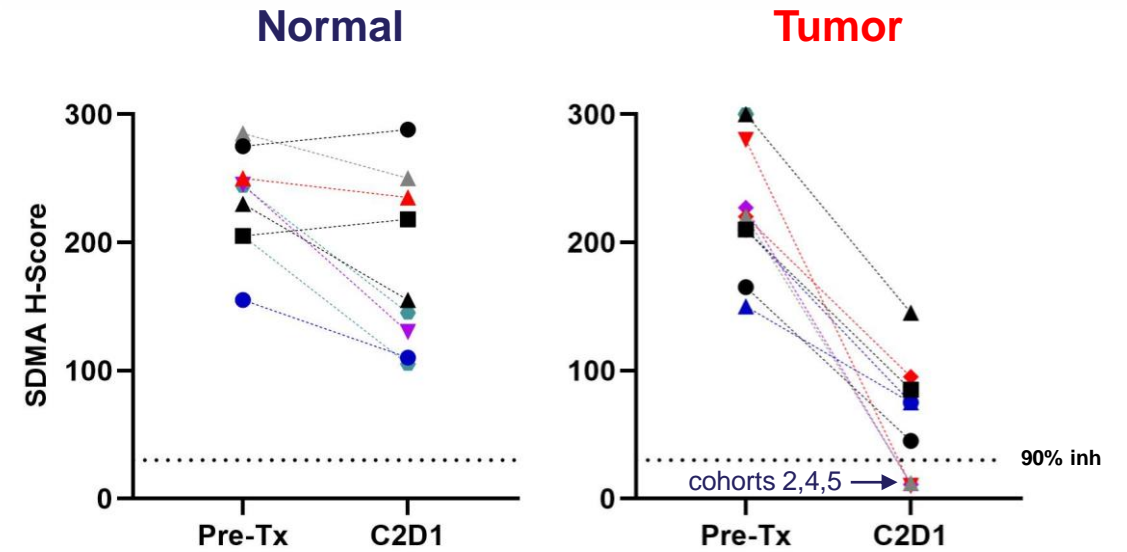
TNG908 selectively inhibits PRMT5 in tumor cells in a dose-dependent manner

Selected SDMA IHC cohorts 3-5



Continued tumor-selective PD modulation in Cohort 5

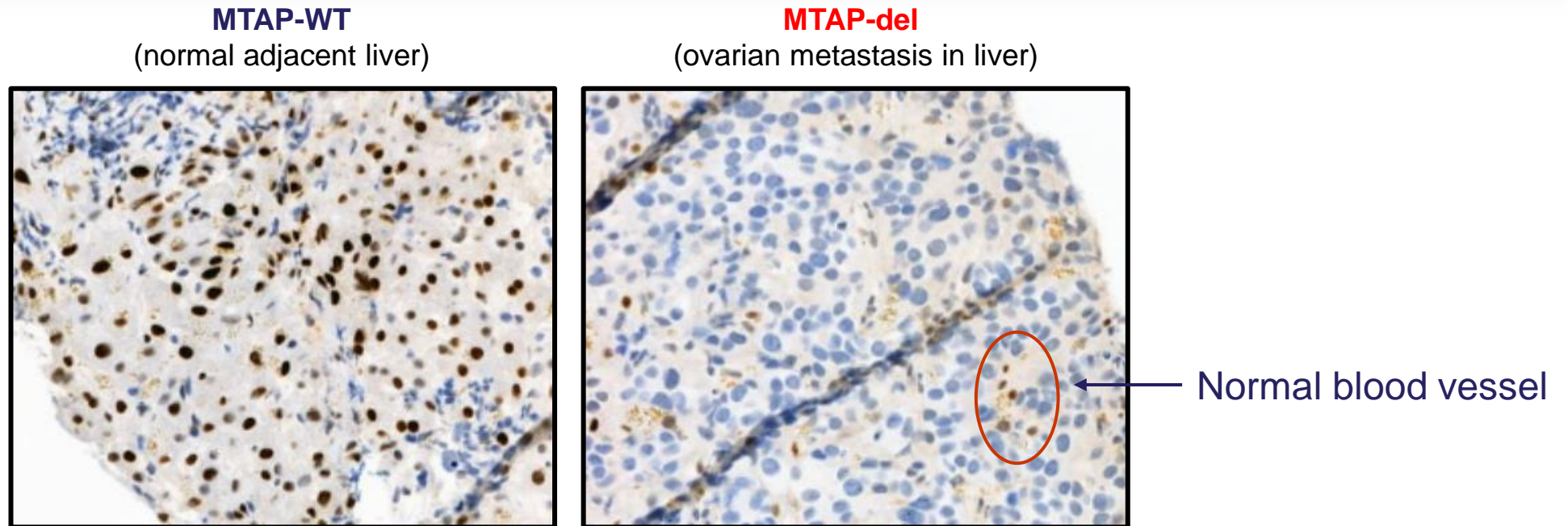
SDMA IHC cohorts 1-6



- Cohort 1 (25 mg BID)
- Cohort 2 (50 mg BID)
- Cohort 3 (75 mg BID)
- Cohort 4 (112.5 mg BID)
- Cohort 5 (175 mg BID)
- Cohort 6 (262.5 mg BID - normal only)

MTA-cooperative PRMT5 inhibition: proof-of-mechanism in the cohort 2 ovarian cancer patient

Cancer-specific SDMA reduction in MTAP-del liver metastasis

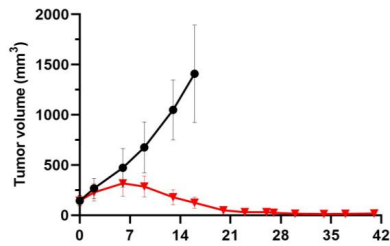


Cohort 2 (cycle 2/day 1) core biopsy

TNG908 is comparable or superior to MRTX1719 in multiple MTAP-null patient-derived xenografts

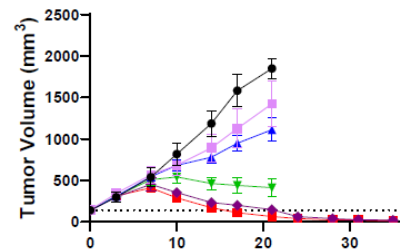
Mesothelioma and cholangiocarcinoma

TNG908

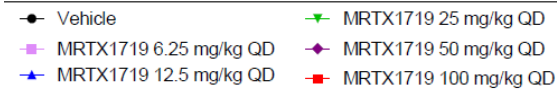
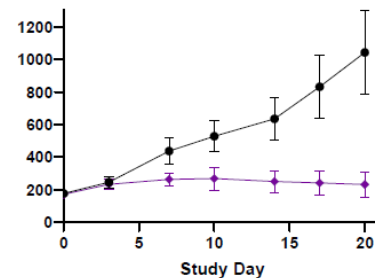
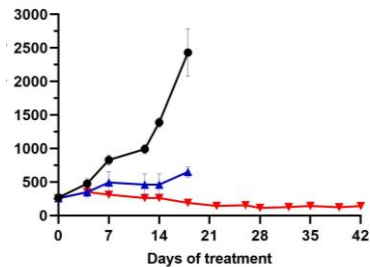


Mesothelioma

MRTX1719

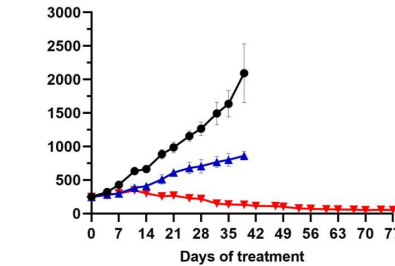


Cholangiocarcinoma



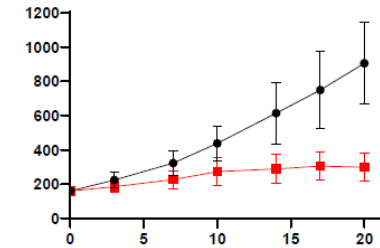
Non-small cell lung cancer

TNG908

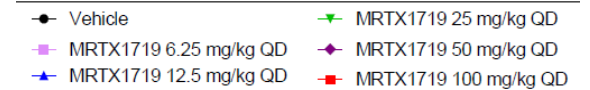
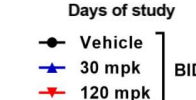
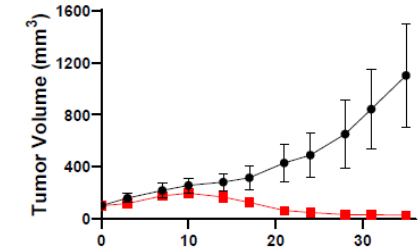
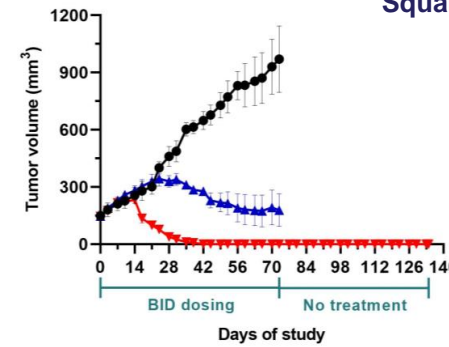


Adenocarcinoma

MRTX1719



Squamous cell carcinoma



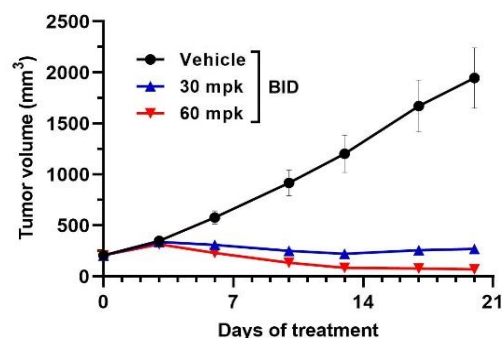
Activity of MTA-cooperative PRMT5 inhibitors not primarily driven by selectivity

LU99 non-small cell lung cancer

MTAP del, KRAS mut

TNG462 45X

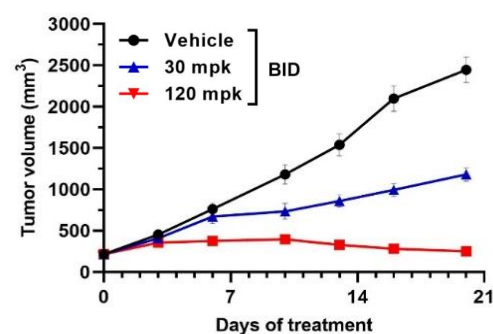
MTAP del selectivity



Deep regression

TNG908 15X

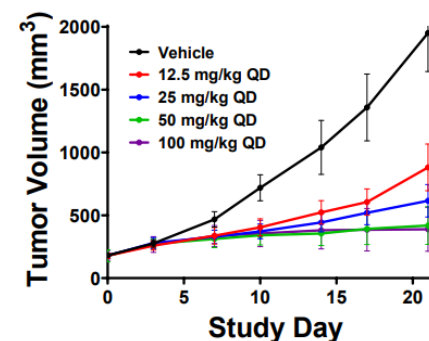
MTAP del selectivity



Minor regression

MRTX1719 74X

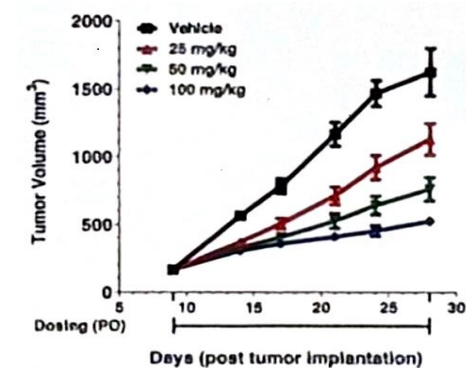
MTAP del selectivity



Tumor stasis

AMG 193 40X

MTAP del selectivity



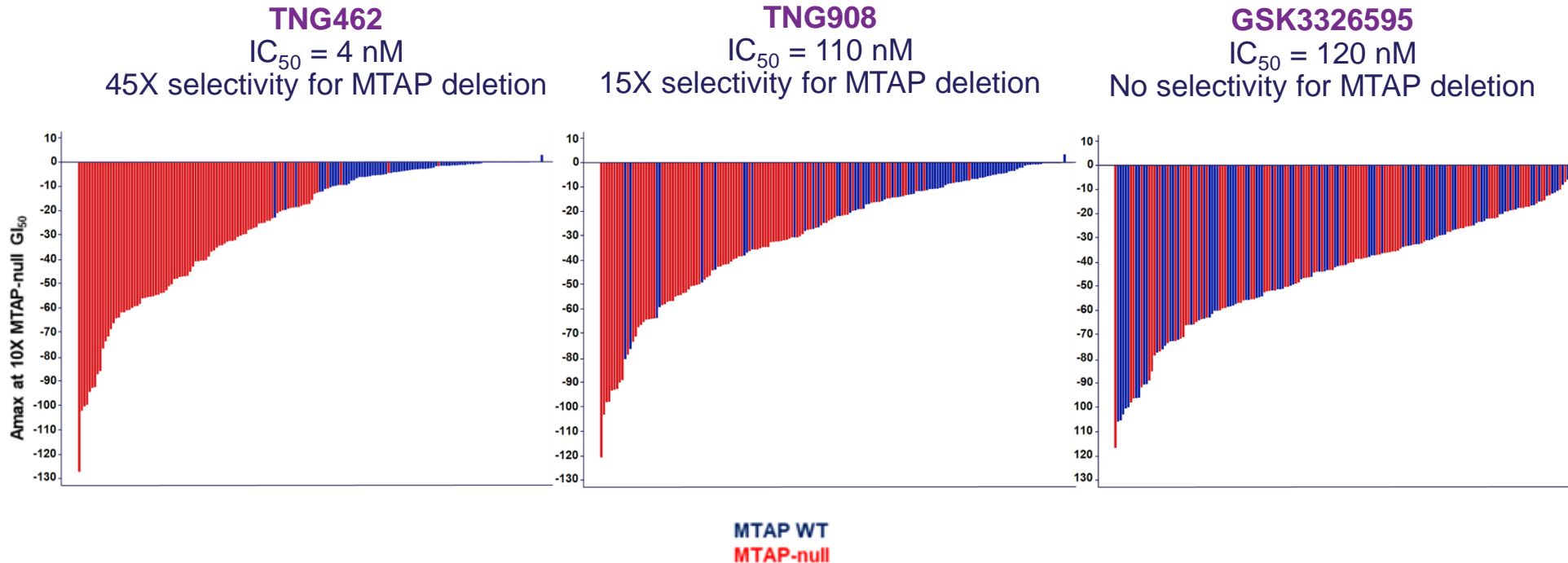
Tumor growth inhibition

Engstrom et al., 2023

AACR-NCI-EORTC 2023

TNG462 is highly potent and selective for MTAP deletion

180 cancer cell lines from multiple lineages



7-day viability assay
Same cell lines represented in all panels

TNG462

- TNG462 PK profile optimized for maximal target coverage
- Enhanced potency and MTAP selectivity provides potential for broader and deeper clinical activity
- Only TNG908 is brain penetrant in non-human primates

TNG462 is a potentially best-in-class PRMT5 inhibitor

TNG462 increases depth and durability of response in xenograft models



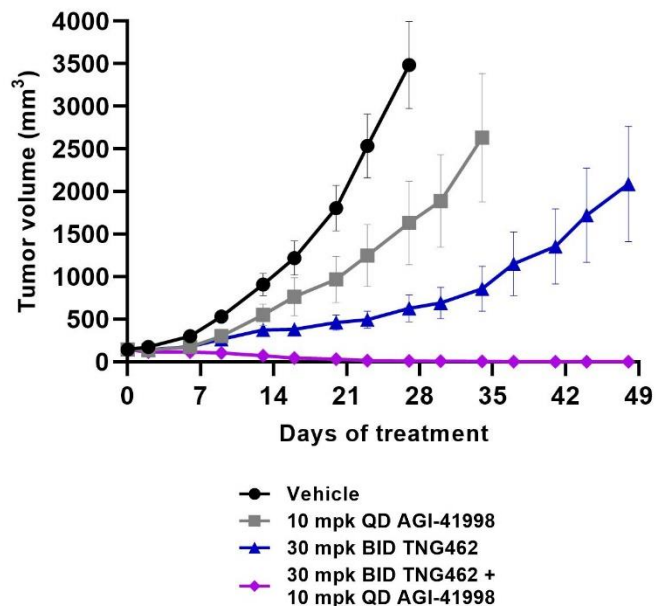
Strong efficacy across histologies

- Tumor growth inhibition, stasis or regression in all models (n=22) with no bias for specific histologies
- Regression achieved in ~55% of models (vs 30% with TNG908)

Single agent TNG462 is as efficacious as combination with MAT2Ai

TNG462 + MAT2Ai combination efficacy

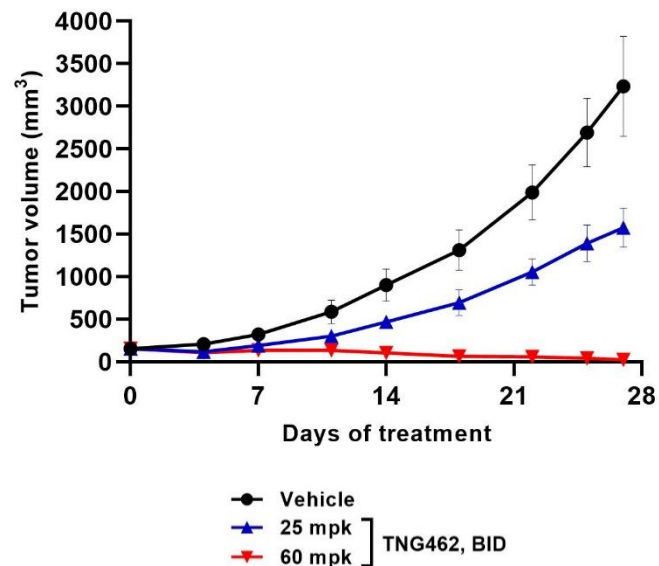
NCI-H838 (MTAP-del NSCLC)



Synergy demonstrated with well-tolerated combination of sub-therapeutic doses

TNG462 single agent efficacy

NCI-H838 (MTAP-del NSCLC)



Tumor regression achievable with single agent activity

Rationale

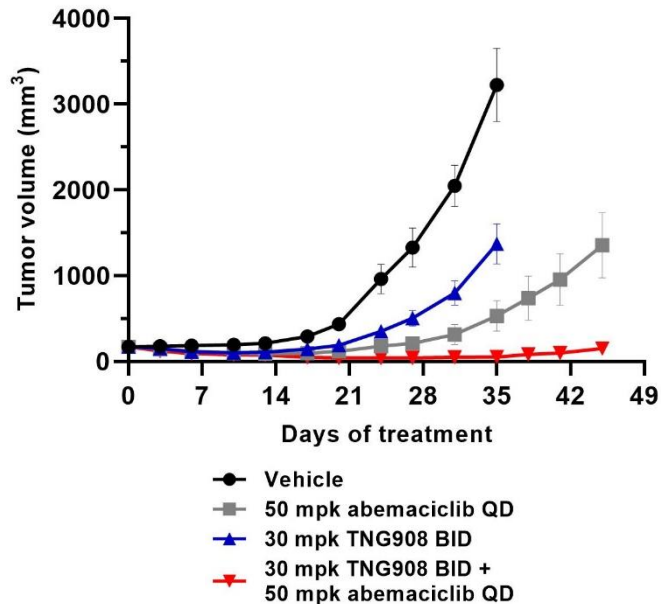
- MAT2A inhibitors are indirect PRMT5 inhibitors and may add benefit in MTAP-del cancers in combination with TNG908 and TNG462
- TNG462 single agent activity at therapeutic dose can drive equivalent response to MAT2A combination in the same xenograft model

Combination strategies driven by co-occurring genetic alterations

TNG908 + CDK4/6i

U87MG

(MTAP-del/CDKN2A-del GBM)

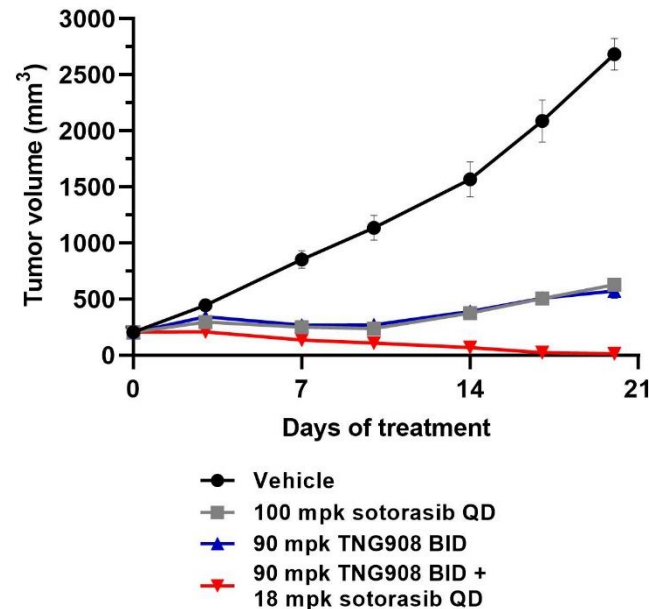


MTAP-del cancers are also CDKN2A-del

TNG908 + KRAS^{G12C}

LU99

(MTAP-del/KRAS^{G12C}/CDKN2A-del NSCLC)

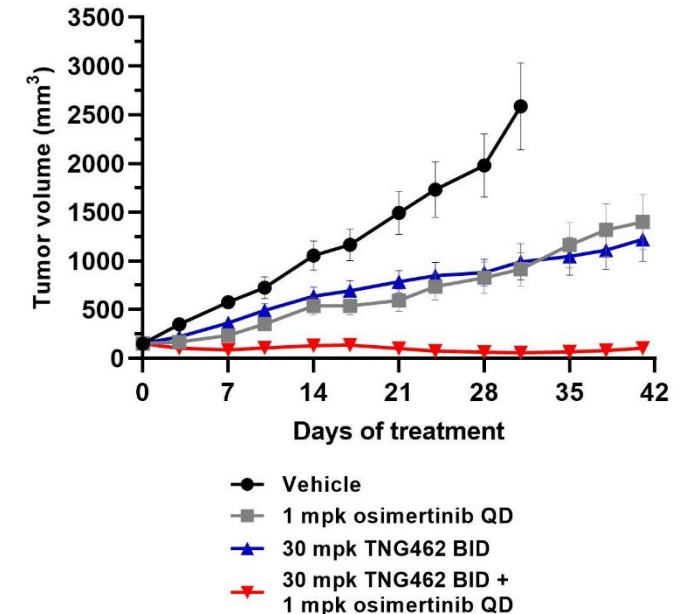


10-15% of MTAP-del lung (adeno) cancers also are KRAS G12C-mut

TNG462 + EGFRi

NCI-H1650

(MTAP-del/EGFR^{ΔE746-A750} NSCLC)



20% of MTAP-del lung (adeno) cancers also are EGFR-mut

TNG908 and TNG462 summary

PROGRAM	PATIENT SELECTION	DISCOVERY	IND-ENABLING	CLINICAL TRIALS		STATUS
				Phase 1/2	Phase 3	
PRMT5 TNG908	MTAP-deleted cancers	[Progress bar: Discovery to Ind-Enabling]		[Progress bar: Phase 1/2 to Phase 3]		Dose expansion ongoing, clinical data 2H 2024
PRMT5 TNG462		[Progress bar: Discovery to Ind-Enabling]		[Progress bar: Phase 1/2 to Phase 3]		Dose expansion planned 2Q 2024 clinical data 2H 2024

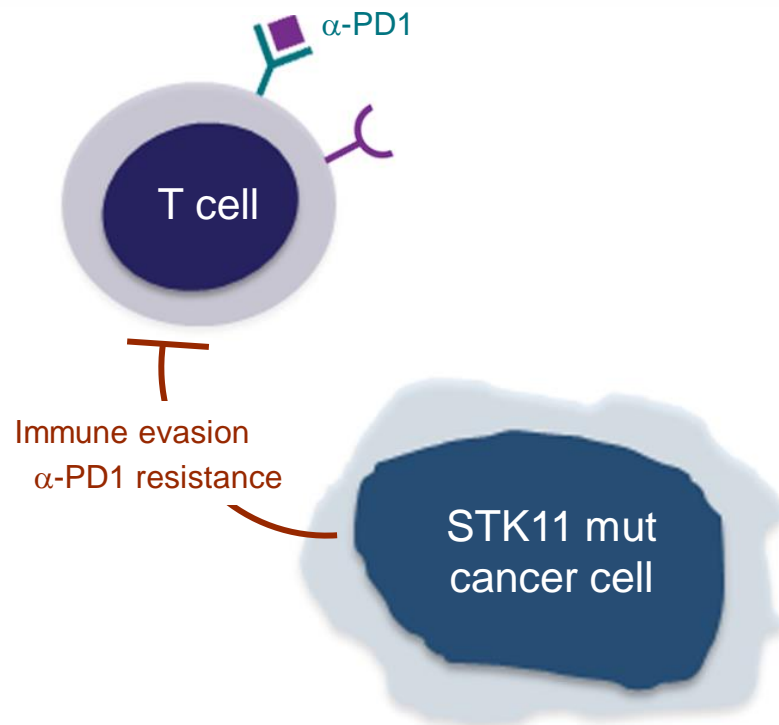
- TNG908 and TNG462 induce deep regressions and some cures in multiple xenografts with no bias for specific histologies, predicting strong single agent activity
- TNG908, but not TNG462, is brain-penetrant in non-human primates
- TNG462 has more potency, greater MTAP selectivity and a longer half life than TNG908
- FDA granted Orphan Drug Designation to TNG462 for soft tissue sarcomas

TNG260

CoREST inhibition in STK11-mutant cancers

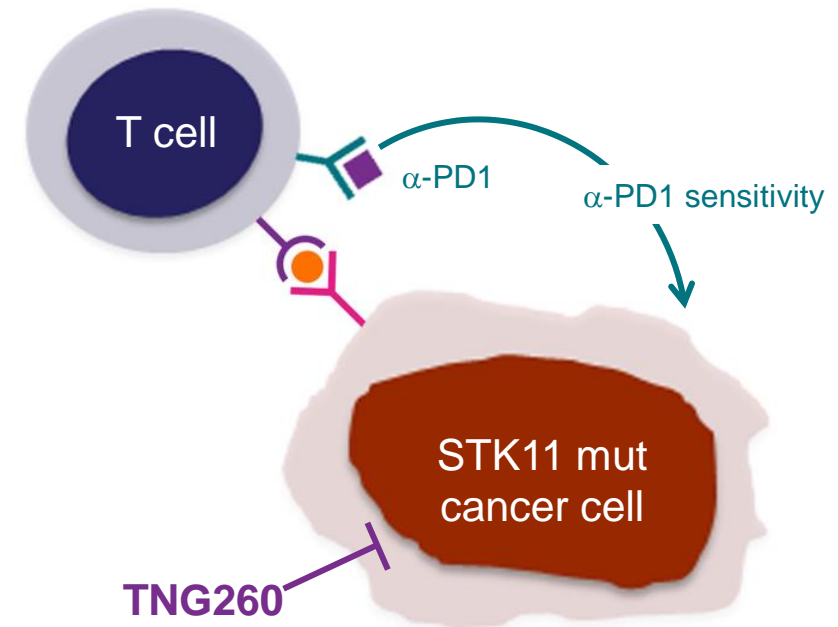
TNG260 reverses immune evasion caused by STK11 mutations

Immune evasion driven by tumor suppressor gene loss



STK11 re-activation is not feasible

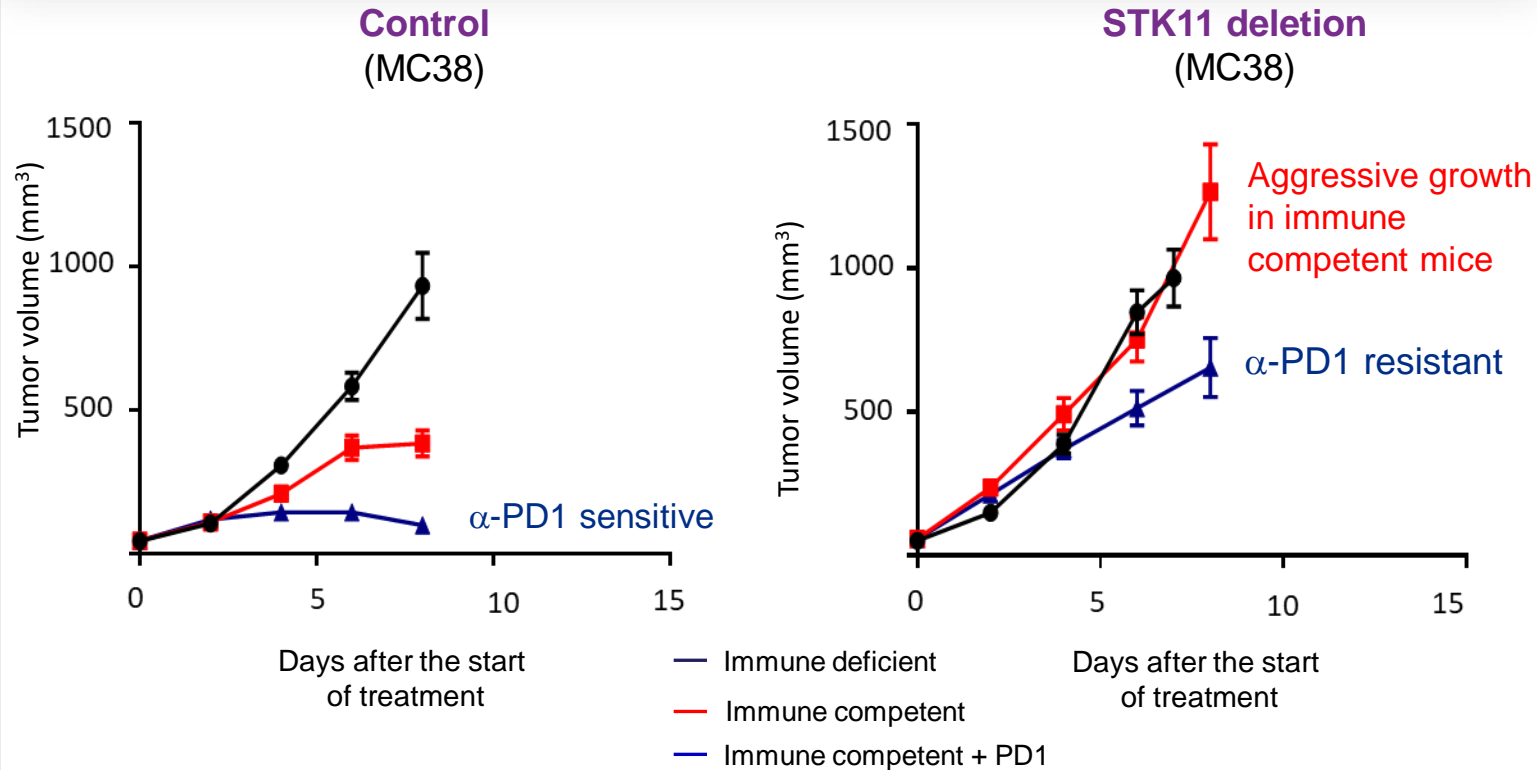
TNG260 reverses tumor-intrinsic immune evasion



Selective CoREST inhibition in cancer cells enables immune-mediated cytotoxicity

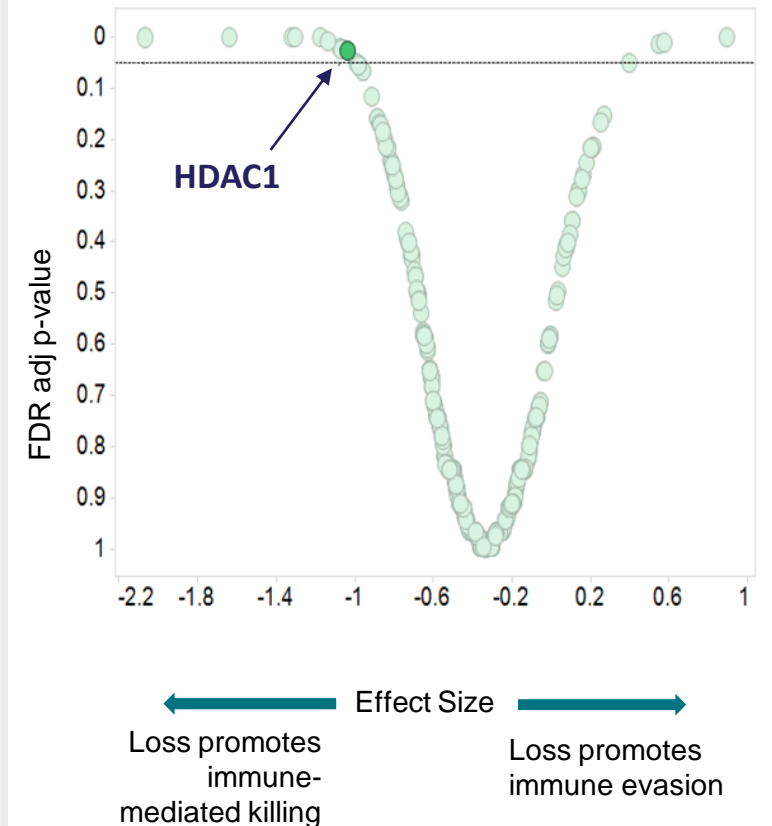
STK11 loss-of-function mutations drive immune evasion

STK11 deletion causes α -PD1 resistance

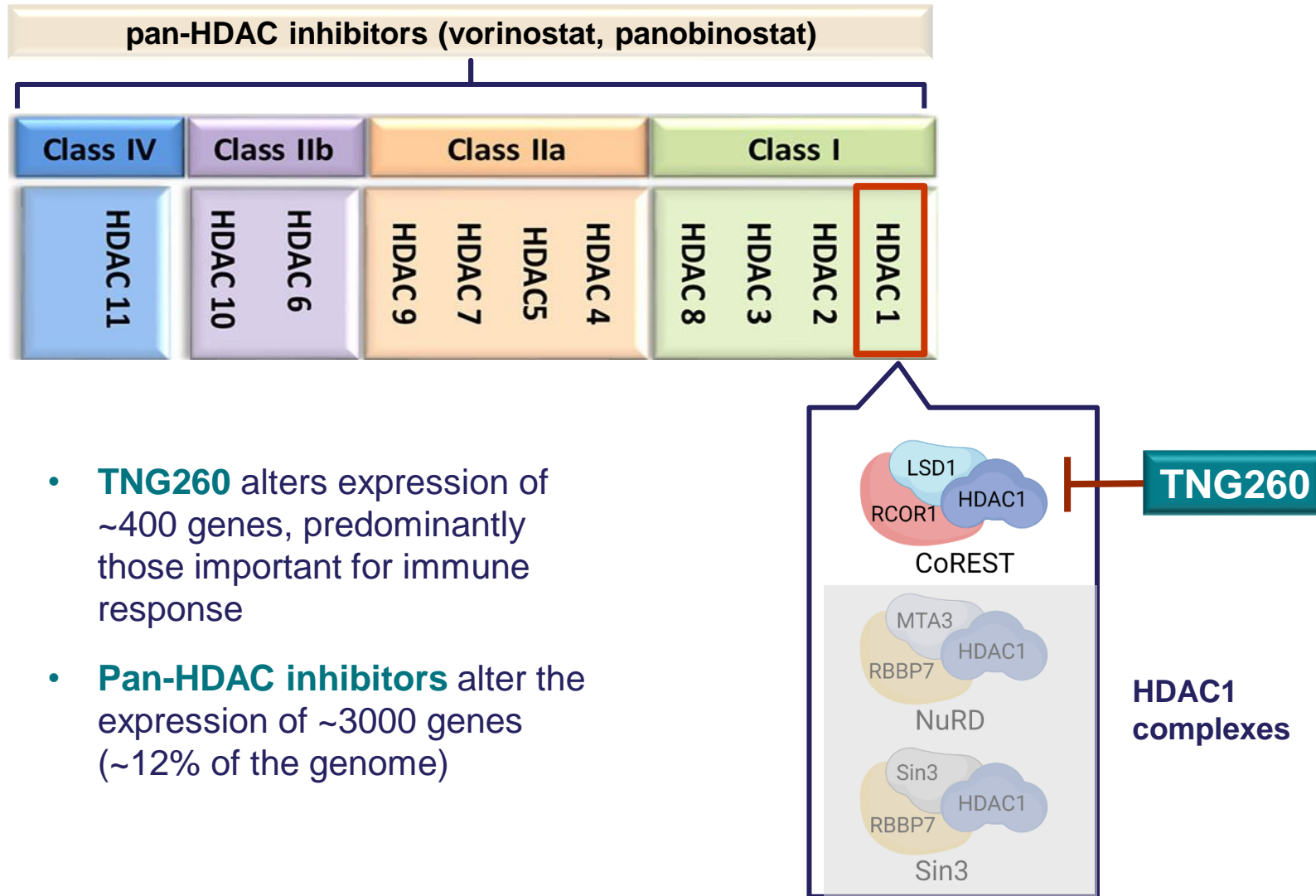


STK11 loss-of-function mutations are associated with clinical immune checkpoint inhibitor resistance

In vivo CRISPR screening identifies mediators of immune evasion reversion



TNG260 is a highly selective CoREST complex inhibitor

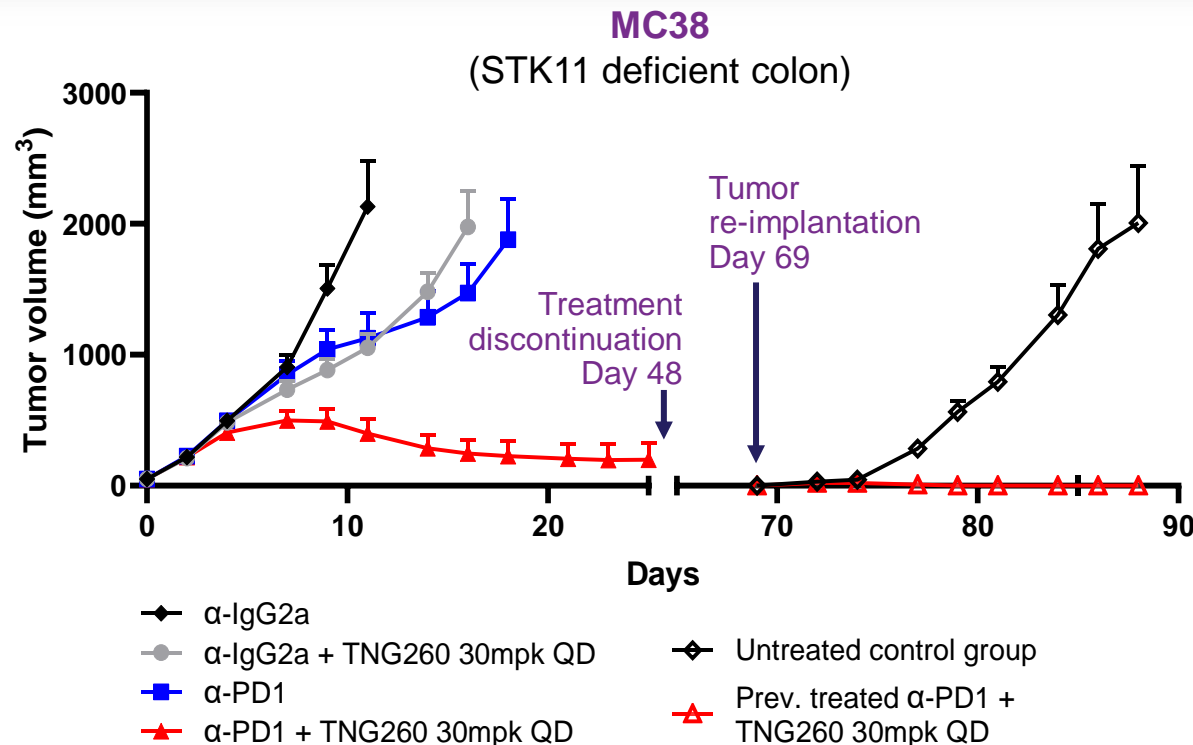


Key points

- CoREST-mediated deacetylation regulates transcription of a specific set of immune response genes
- Sin3 is the predominant HDAC1 complex involved in hematopoiesis
- Pan-HDAC inhibitors target all 11 HDAC isoforms
- HDAC3 is an essential gene and likely a primary contributor to pan-HDACi toxicity

TNG260 + α -PD1 induces complete regression and prevents re-implantation in STK11-mutant xenografts

TNG260 IC50 100nM, 10X CoREST complex selectivity



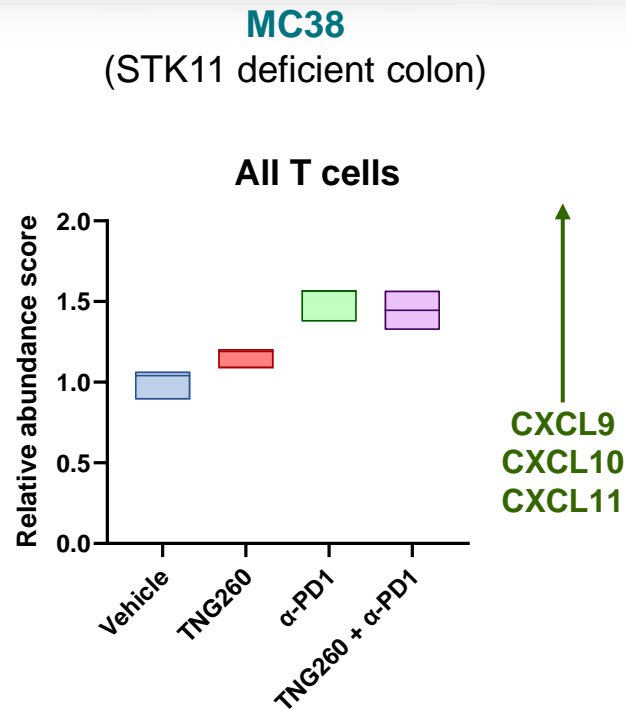
- 5/8 mice had complete tumor regression at day 34, treatment discontinued at day 48
- All mice with complete regression remained tumor free off treatment for 21 days
- 5/5 mice with complete regression rejected tumor reimplantation

TNG260

- Potent, highly selective molecule with good pharmacologic properties
- Marked in vivo efficacy in combination with α -PD1 antibody
- Induces immune memory and renders treated mice resistant to tumor re-implantation

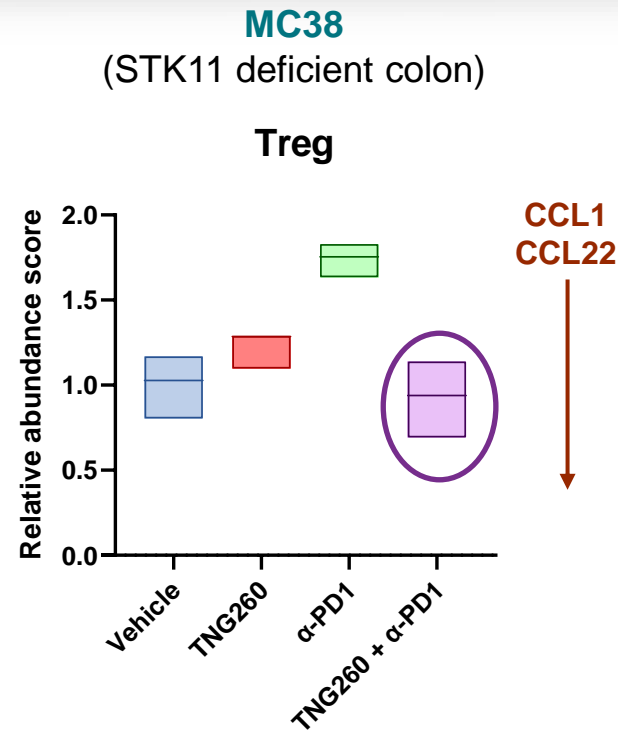
TNG260 eliminates Treg infiltration caused by α -PD1 without reducing cytotoxic T cell recruitment

α -PD1 induces tumor cell cytokine secretion that recruits T cells



- CXCL9, CXCL10 and CXCL11 attract cytotoxic T cells
- α -PD1 recruits both cytotoxic T cells and suppressive Tregs

TNG260 eliminates immune suppressive Treg infiltration caused by α -PD1



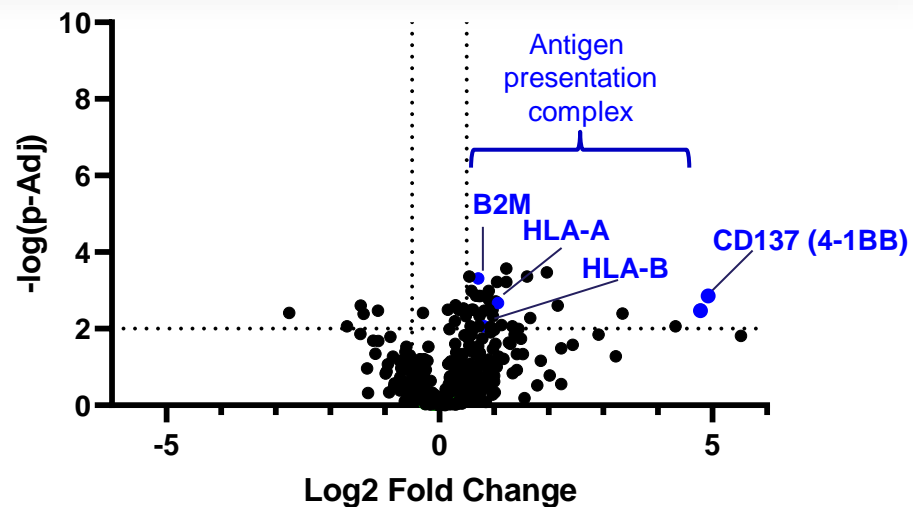
- CCL1 and CCL22 attract suppressive Treg cells
- TNG260 prevents α -PD1-driven Treg recruitment

Mechanism of action

- TNG260 causes transcriptional reprogramming in STK11-mut cells
- TNG260-mediated transcriptional changes alter tumor secretion of specific cytokines
- Changes in cytokine secretion caused by TNG260 + α -PD1 change the tumor T cell ratio to strongly favor immune-mediated tumor cell killing

TNG260 selectively regulates immune function

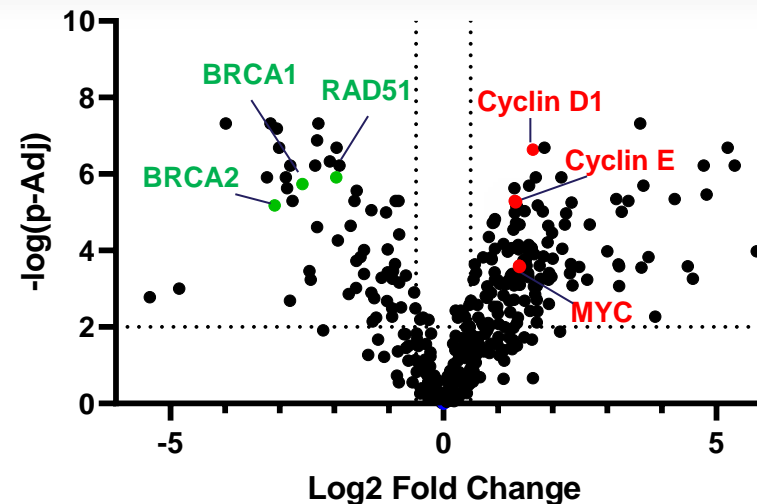
TNG260 (CoREST)
A549 (STK11-mutant NSCLC)



	Rank
Immune Cell Adhesion and Migration	1
Matrix Remodeling and Metastasis	2
Antigen Presentation	3

Top scoring genes activated by CoREST inhibition are immunomodulatory

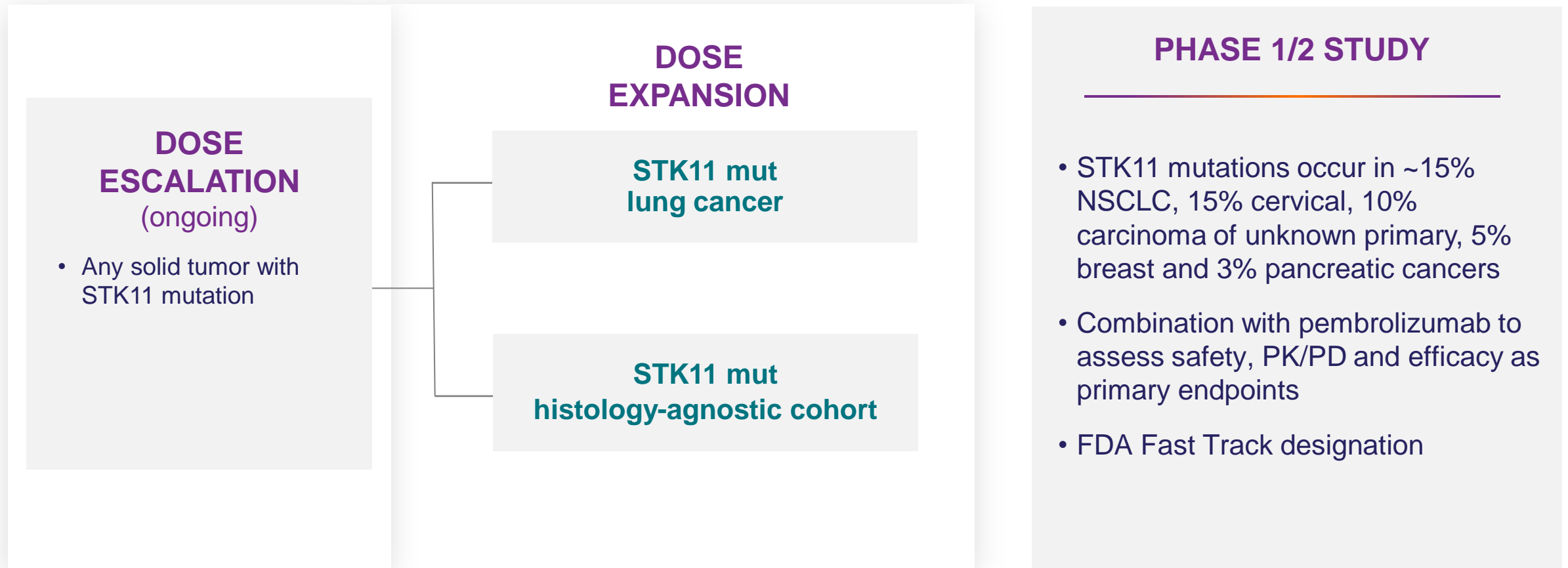
Vorinostat (pan-HDAC)
A549 (STK11-mutant NSCLC)




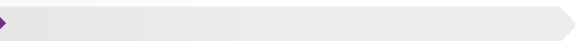
	Rank
Cell Proliferation	1
DNA Damage Repair	2
Wnt Signaling	3

Top scoring genes activated by pan-HDAC inhibition regulate cell cycling and DNA damage repair

TNG260 + pembrolizumab first-in-human trial



TNG260 summary

PROGRAM	PATIENT SELECTION	DISCOVERY	IND-ENABLING	CLINICAL TRIALS		STATUS
				Phase 1/2	Phase 3	
CoREST TNG260	STK11-mut cancers					Dose escalation ongoing

- STK11 mutations are associated with checkpoint inhibitor resistance in lung cancer patients
- TNG260 is a novel, highly selective CoREST complex inhibitor
- TNG260 reverses checkpoint inhibitor resistance in preclinical STK11-mut models and induces immune memory that prevents tumor regrowth in responders
- Phase 1/2 clinical study ongoing evaluating efficacy in combination with pembrolizumab in STK11-mutant cancers

FINANCIAL HIGHLIGHTS AND MILESTONES

Sufficient cash to achieve multiple projected key milestones

Clinical milestones

- ✓ TNG462 first patient dosed 3Q 2023
- ✓ TNG260 first patient dosed 3Q 2023
- TNG908 clinical data 2H 2024
- TNG462 clinical data 2H 2024

Cash balance

- \$344M cash, cash equivalents and marketable securities as of March 2024
- Cash runway into 2027 funds POC readouts for all three clinical programs



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