LEAP THERAPEUTICS company presentation

DKN-01 R&D Day July 12, 2022



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 trials, collaborations and partnerships, future financial position, future revenues, projected costs, prospects, plans and objectives of management, are forward-looking statements within the meaning of U.S. securities laws. 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, although not all forward-looking statements contain these identifying words.

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This presentation does not constitute an offer to sell, or the solicitation of an offer to buy, any securities.



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Agenda

----- DKK1 Biology and DKN-01 Mechanism of action

Gastric cancer:
 Samuel Klempner, MD
 Massachusetts General Hospital

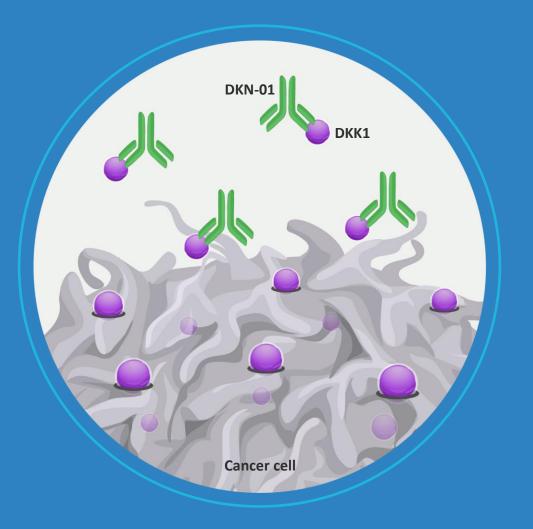
Colorectal cancer:

Zev Wainberg, MD UCLA Endometrial cancer: Rebecca Arend, MD University of Alabama at Birmingham

Prostate cancer: David Wise, MD, PhD New York University



DKN-01 Overview





Biomarker-targeted development



Single agent activity in three indications



Combinations with checkpoint inhibitors and chemotherapy



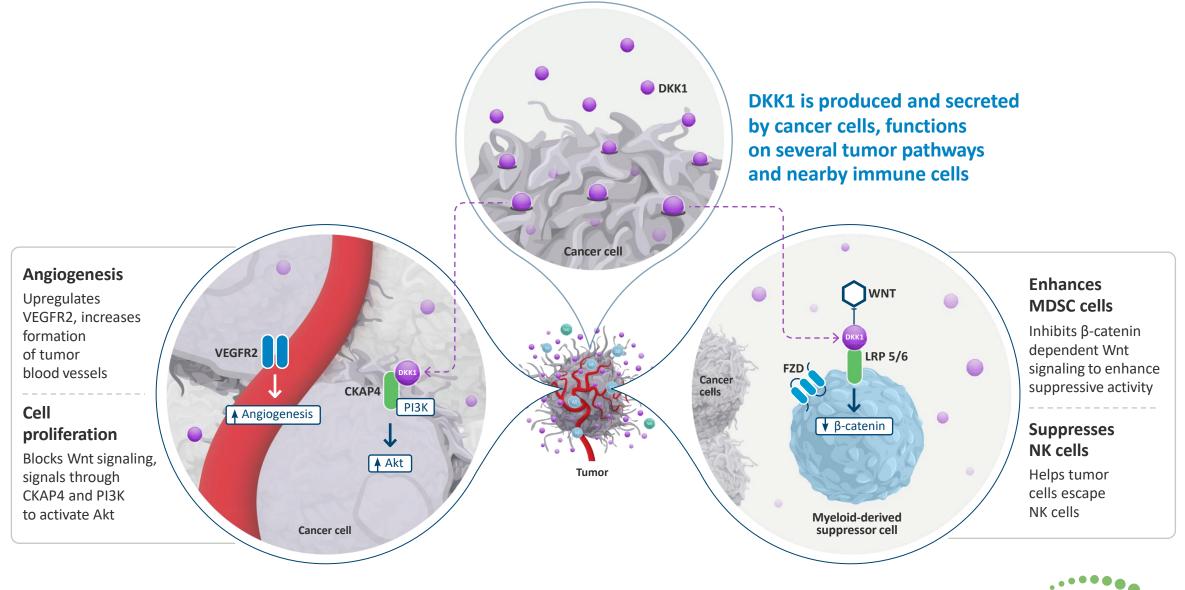
Strategic partnership with BeiGene



Important milestones in 2022 and 2023

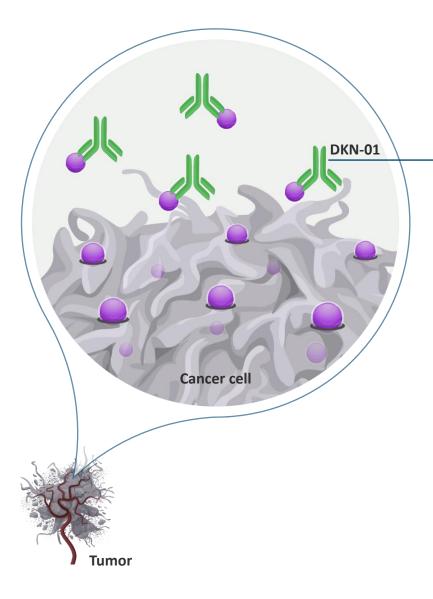


The role of DKK1 in cancer



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DKN-01 - an anti-DKK1 antibody



DKN-01 binds and removes free DKK1 from the TME:



proliferation Blocks signaling through CKAP4 and PI3K to downregulate akt

Reduces cell



Reduces angiogenesis

Reduces blood vessel formation, upregulates key cytokines, IFNy, IL-15 and IL-33



Suppresses MDSC cells

B-catenin dependent Wnt signaling reprograms MDSCs and reduces immunosuppressive activity

Activates NK cells Upregulates

Upregulates NK cell ligands on tumor, production of Granzyme B by activated NK cells

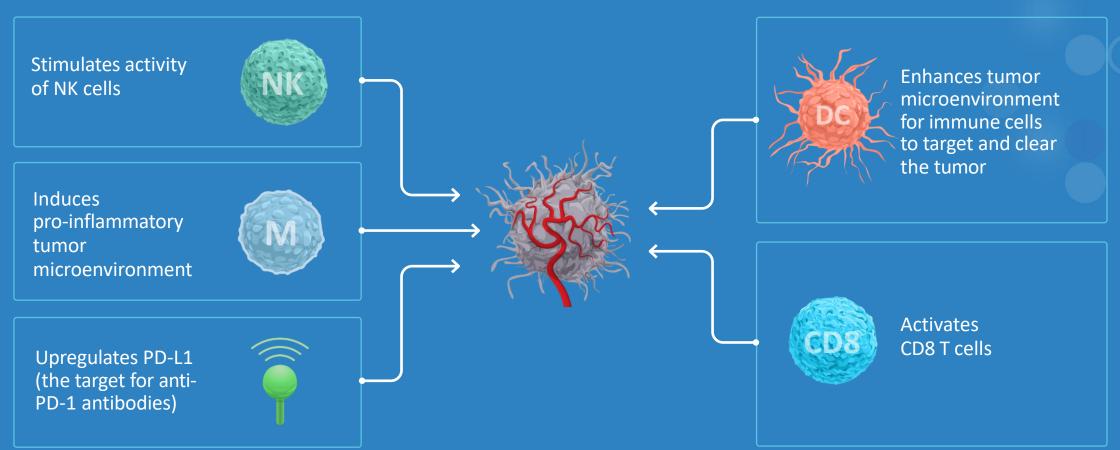
Single agent and combination activity demonstrated in three different tumor types. Well-tolerated as monotherapy and in combination with chemotherapy or checkpoint inhibitors.



DKN-01 + anti-PD-1 combination

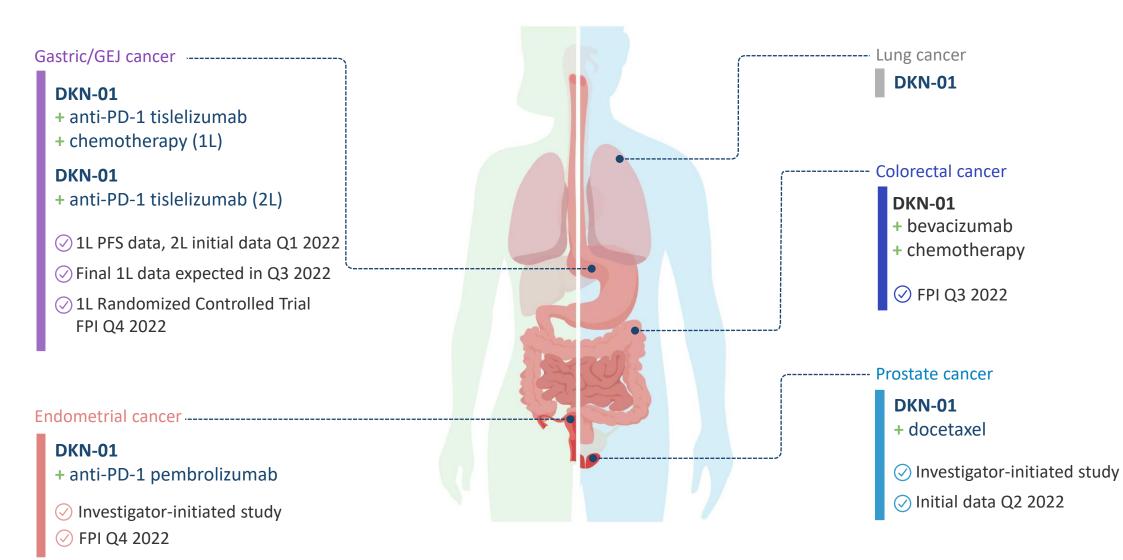
DKN-01 stimulates innate immune system:

Anti-PD-1 stimulates CD8 T cell adaptive immunity:



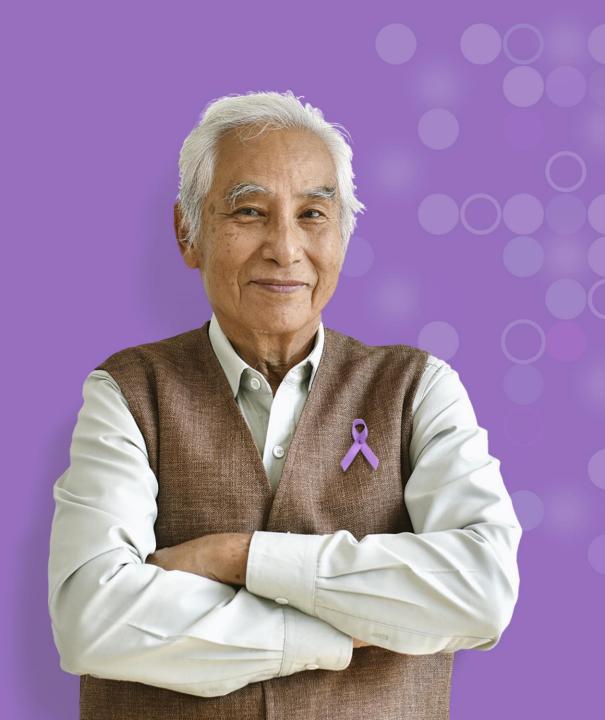


Pipeline





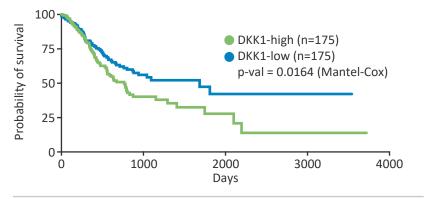
DKN-01 Gastric cancer development



DKK1-high levels are associated with poor survival

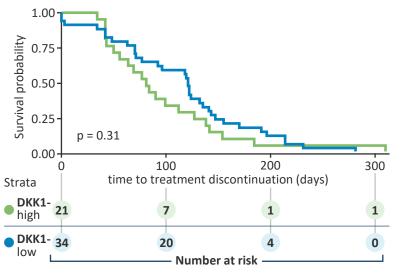
High levels of DKK1 correlate with shorter overall survival In gastric cancer

TCGA STAD dataset



DKK1-high is associated with poor response to first-line platinum + fluoropyrimidine based therapies in GEJ/gastric cancer patients

Collaboration with Tempus



DKK1 expression data (TCGA):

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Pancreatic	•	-		-	Å		1000	1	10
Esophageal		-	-		Ó	-	-	(
Head and neck	••	-						•	
ТЛВС			-						
G/GEJ							-	•	•
Prostate									
Lung adeno	-	-					alp-u		
Liver	1				-			-	
Uterine	1				-			• •	
CRC	10			-		-	••		
		DK	K1-l	ow		DK	K1-l	nigh	



overall survival

~2.5 years shorter OS in DKK1-high patients



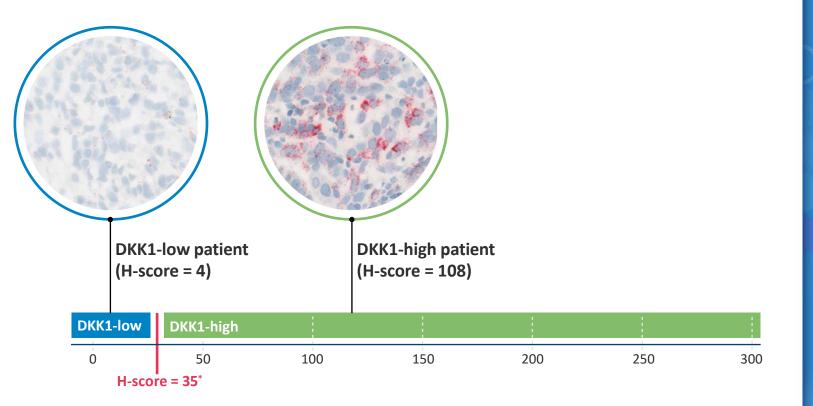
DKK1 expression determined using RNAscope



Chromogenic *in situ* hybridization RNAscope

The biopsy sample is stained to identify DKK1 mRNA

Pathologist determines histology score (H-score), measuring DKK1 expression rather than protein itself



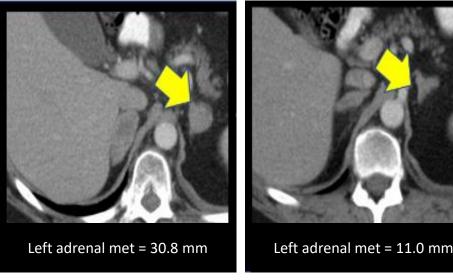
Each red dot is an individual mRNA for DKK1 Number of cells and intensity of staining is converted to H-score



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DKN-01 single agent activity in heavily pretreated esophagogastric cancer patients

On study 1 year, reduction -33.9% failed prior anti-PD-L1 + IDOi



Baseline

A CONTRACTOR	1 N
- VA	
The said the	50 5
Left adrenal met = 11.0 r	nm

Best overall response

Partial response

Stable disease

Progressive disease

of 20 evaluable patients*

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4-month scan

2L+ EGC **DKN-01**

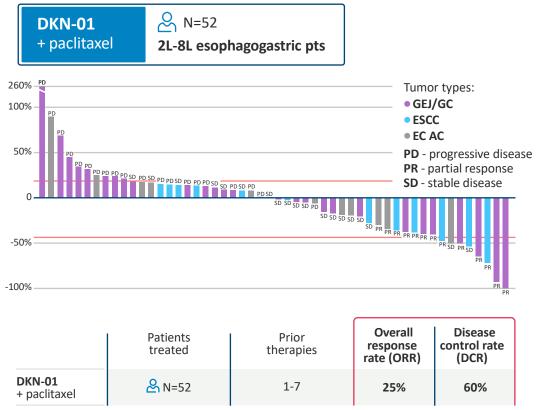
2 monotherapy PRs

Clinical benefit rate 40%





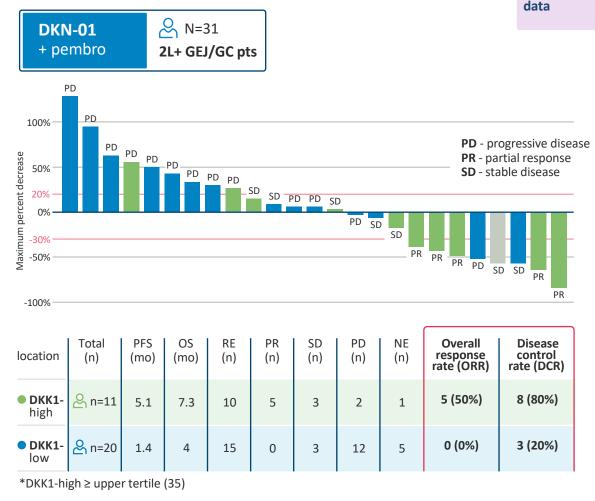
Clinical activity of DKN-01 plus paclitaxel or anti-PD-1 antibody



Strong broad activity in esophagogastric cancer in heavily pretreated patients

	Patients treated	PFS (months)	OS (months)	Overall response rate (ORR)	Disease control rate (DCR)	
DKN-01 + paclitaxel	<mark>&</mark> №=15	4.5	12.7	46.7%	73.3%	

ORR in 2L patients is ~47%



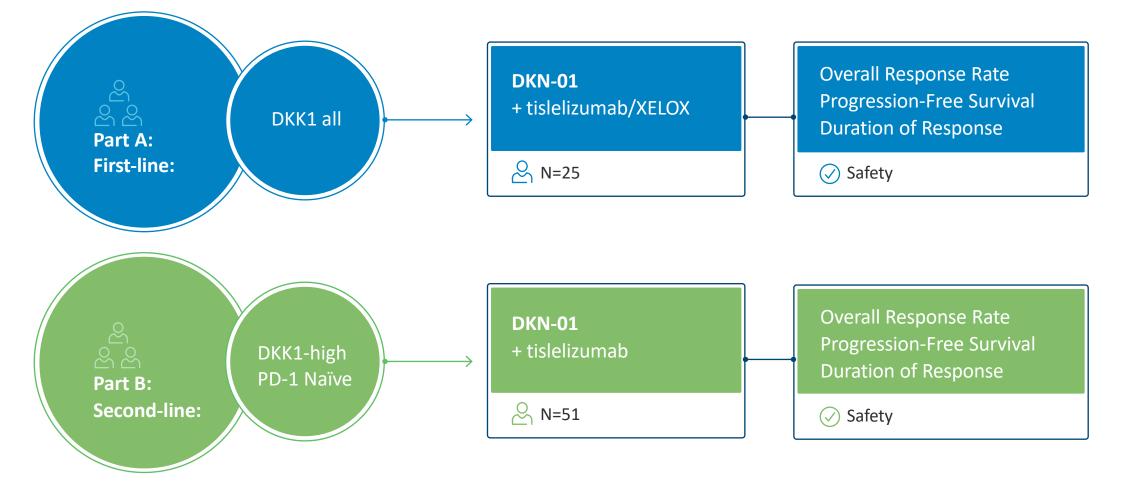
Achieved improved ORR, PFS, and OS in DKK1-high patients Identified H-score threshold for DKK1 high/low expression



GEJ/GC Historical

DisTinGuish study design: advanced GEJ/Gastric cancer

Assess the safety and anti-tumor activity of DKN-01 in combination with tislelizumab +/- chemotherapy

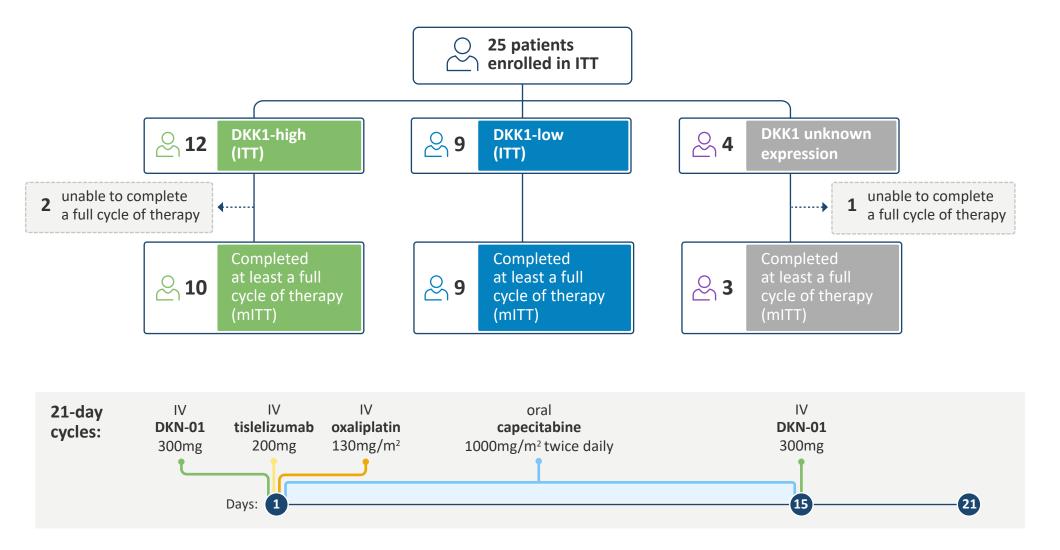




1L GEJ/GC DKN-01 + tislelizumab + chemotherapy

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DisTinGuish Part A consort diagram





1L GEJ/GC DKN-01 + tislelizumab + chemotherapy

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Best overall response by DKK1 expression

GEJ Gastric 0 0 \cap Ο Ο Ο 0 SD SD SD SD SD -30% SD PR PR -50% PR PR

Best % change in sum of diameters

-100%

	mITT* population 읎N=22	DKK1 -high	DKK1-low	● DKK1-unknown &N=3	
CR - complete response	1 (4.5%)	0	1 (11.1%)	0	All 9 of the evaluable DKK1-high patients had
PR - partial response	14 (63.6%)	9 (90.0%)	4 (44.4%)	1 (33.3%)	a partial response
SD - stable disease	6 (27.3%)	0	4 (44.4%)	2 (66.7%)	
PD - progressive disease	0	0	0	0	1 PR went to curative
NE - non-evaluable	1 (4.5%)	1 (10.0%)	0	0	surgery with pathological CR

1L GEJ/GC DKN-01 + tislelizumab + chemotherapy

CR

68.2% ORR in the mITT population

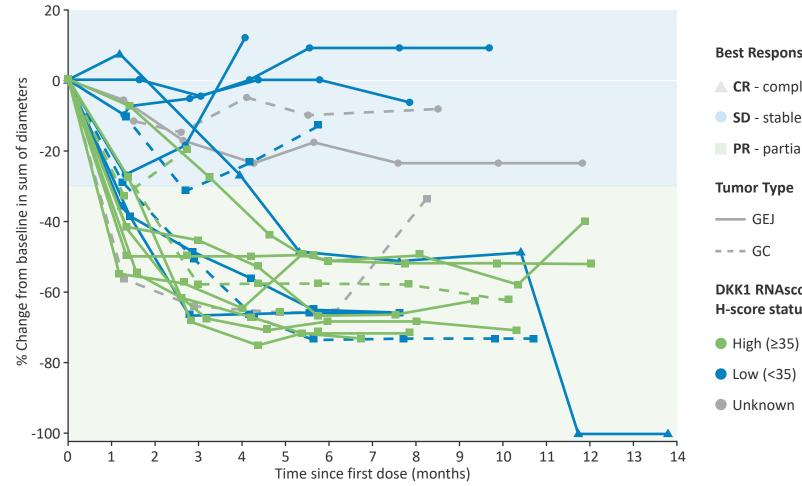
(1 CR; 14 PR)

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*mITT population includes all patients who received > 1 dose of DKN-01 As presented at ASCO GI 2022

Durable response by DKK1 expression

Best % change in sum of diameters



1L GEJ/GC **DKN-01** + tislelizumab + chemotherapy

Best Response

- **CR** complete response
- **SD** stable disease
- **PR** partial response

Tumor Type

- —— GEJ
- --- GC

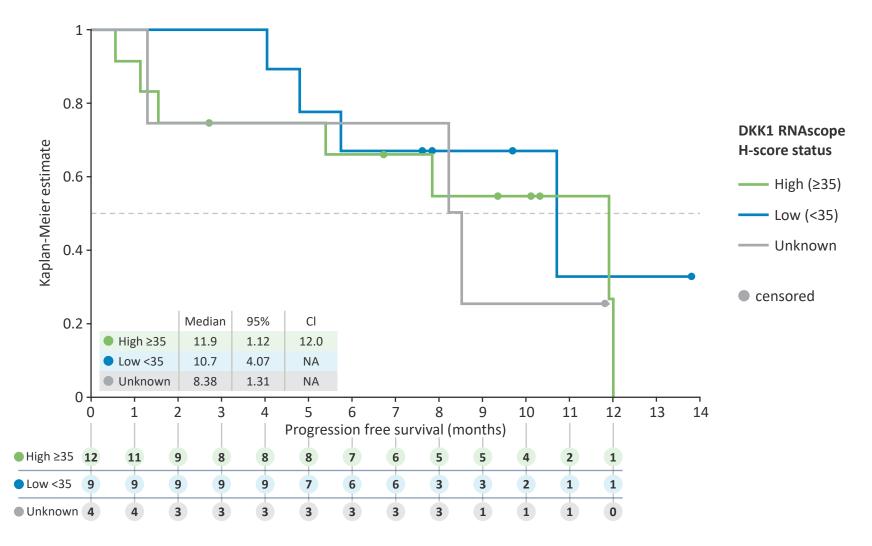
DKK1 RNAscope H-score status

90% **ORR** in DKK1-high patients



PFS longer in DKK1-high patients

Progression-free survival by DKK1 status (N=25)



1L GEJ/GC DKN-01 + tislelizumab + chemotherapy

> Median PFS all: 10.7 mo

Median PFS for DKK1-high: 11.9 mo

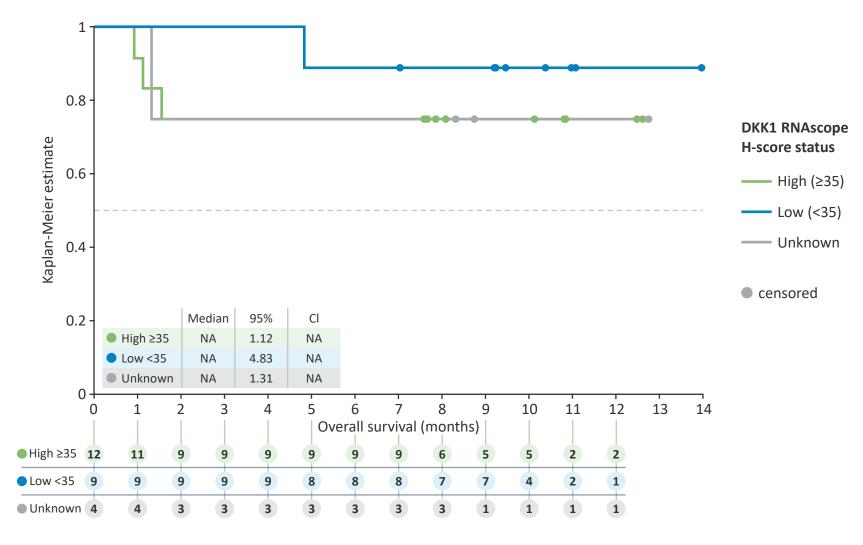
Median PFS from Checkmate-649 (nivolumab + chemo): 7.7 months





Overall survival not reached

Overall survival by DKK1 status (N=25)



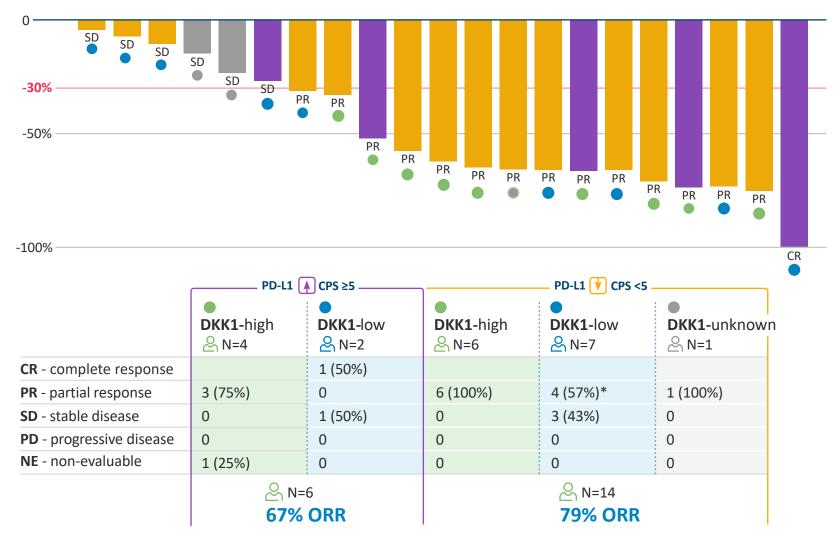
1L GEJ/GC DKN-01 + tislelizumab + chemotherapy

> Median OS from Checkmate-649 (nivolumab + chemo): 13.8 months



Best overall response by PD-L1 expression

Best % change in sum of diameters



vCPS: visually-estimated combined positive score; PD-L1: programmed death-ligand 1

*Includes one pathologic CR

As presented at ASCO GI 2022

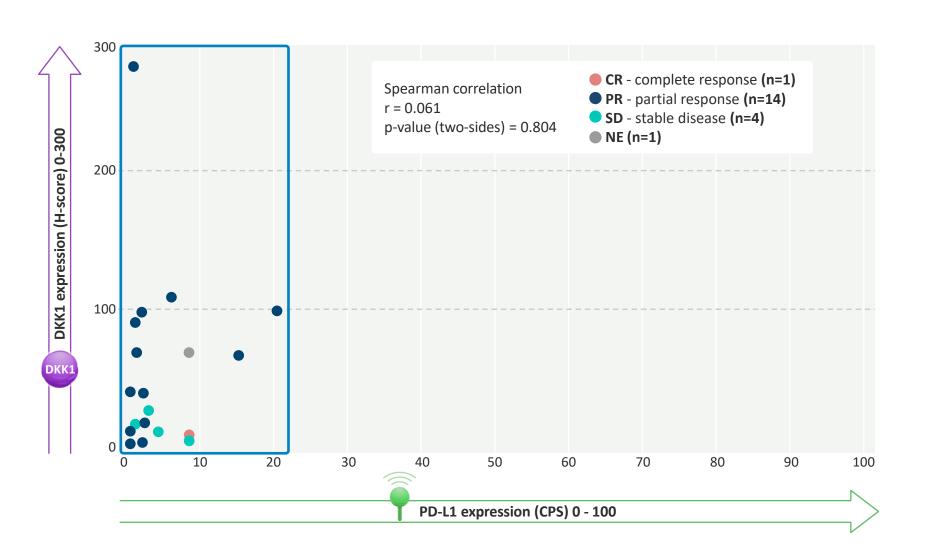
1L GEJ/GC DKN-01 + tislelizumab + chemotherapy

> **79%** ORR in PD-L1 low patients

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DKK1 and PD-L1 expression are not correlated

1L GEJ/GC DKN-01 + tislelizumab + chemotherapy



This population had low overall PD-L1 expression



DKN-01 plus tislelizumab and chemotherapy safety profile

Combination DKN-01+ tislelizumab + capox was well tolerated with manageable toxicity

 \bigcirc

Most common DKN-01-related adverse events were low grade (G1/2):

Fatigue, nausea, diarrhoea, neutrophil count decreased, platelet count decreased

5 patients experienced six Grade ≥3 DKN-01-related adverse events:

Diarrhoea (1), neutrophil count decreased (1), blood phosphorus decreased (2), pulmonary embolism (2)

No Grade 4 events

TEAEs leading to death (Grade 5) within 30 days of last dose

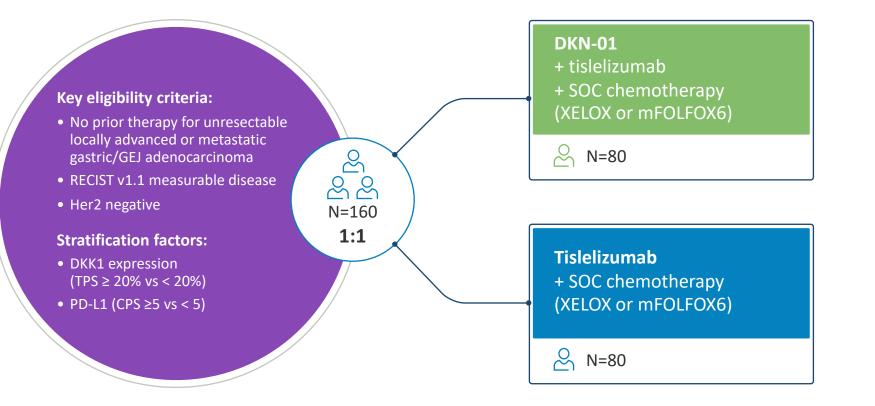
- Pulmonary embolism (1) assessed by the investigator as related to regimen
- Aspiration pneumonia (1) and hepatic failure (1) both assessed as possibly related to disease progression

Preferred terms:	Part A (N=25) No. Patients (%)				
TEAEs leading to death within 30 days of last dose	3 (12%)				
Any adverse event	25 (100%)				
Grade ≥ 3 events	14 (56%)				
DKN-01-related	5 (20%)				
Serious adverse events	10 (40%)				
DKN-01-related	2 (8%)				
Events leading to DKN-01 discontinuation	3 (12%)				
DKN-01-related	1 (4%)				
Events leading to DKN-01 dose reduction	1 (4%)				
Drug-related adverse events					
DKN-01-related	14 (56%)				
Tislelizumab-related	17 (68%)				
Capecitabine-related	24 (96%)				
Oxaliplatin-related	25 (100%)				
Regimen-related	25 (100%)				



DisTinGuish Part C randomized study

1L GEJ/GC DKN-01 + tislelizumab + chemotherapy



Primary objective: PFS DKK1-high

Secondary objectives:
 – PFS all patients
 – OS, DKK1-high and all
 – ORR, DKK1-high and all



DKN-01 highlights in gastric cancer

DKK1

DKK1 is an important new therapeutic target in gastric cancer

DKK1-high is associated with aggressive biology, poor response to standard 5-FU therapy, and shorter survival DKN-01 + anti-PD-1 tislelizumab + chemotherapy (1L) Overall 68% ORR 10.7m PFS

DKK1-high
 90% ORR
 11.9m PFS

DKK1-low
 56% ORR
 10.7m PFS

PD-L1 CPS <5 79% ORR DKK1-high

PD-L1 CPS <5 100% ORR

Response is correlated with DKK1 expression and independent of PD-L1 expression



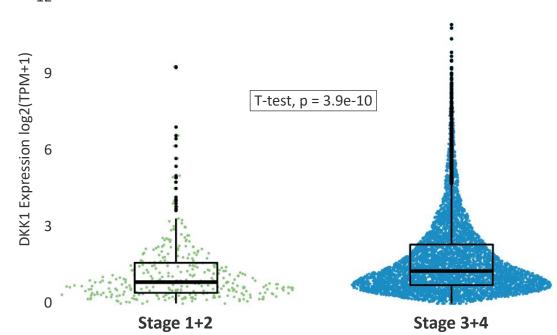
DKN-01 Colorectal cancer development



Rationale for targeting colorectal cancer

- CRC is characterized by hyperactivation of the Wnt pathway, often believed to be the initiating and driving event
- DKK1 drives resistance to 5FU; DKN-01 has demonstrated prior synergy with 5FU-based regimen in GEA
- Preclinically DKN-01 treatment:
 - Shows additive activity with 5FU and is able to overcome 5FU-resistance in xenograft models
 - Has activity alone and with anti-PD-1 in syngeneic models
 - Has activity in wild type and PIK3CA mutant models alone and with a PIK3CA inhibitor

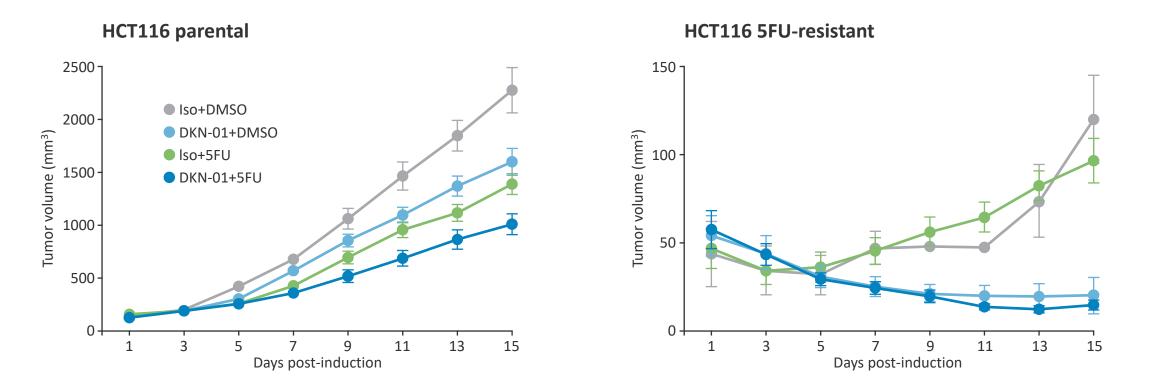
DKK1 elevated in advanced CRC (Tempus)





DKN-01 activity in combination with 5-FU chemotherapy in colorectal cancer models

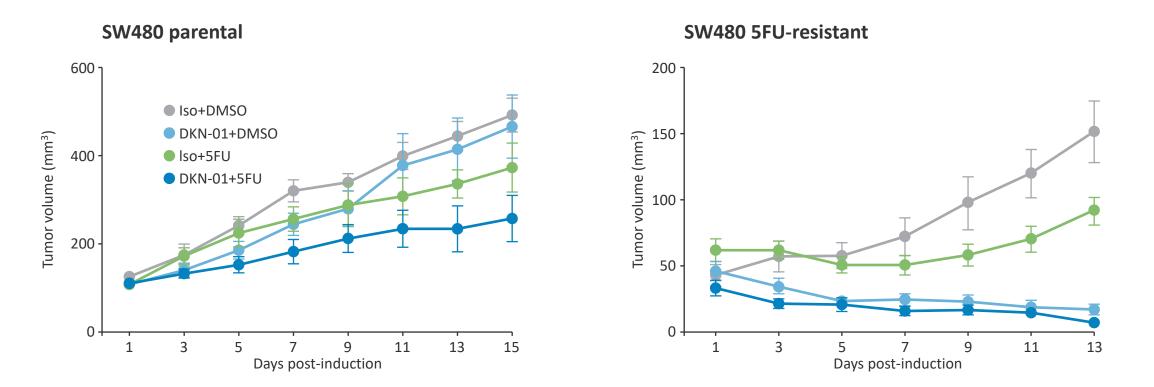
- DKN-01 has efficacy in CRC syngeneic models including HCT116
- Additive activity was seen with 5FU chemotherapy
- In a 5FU chemotherapy-resistant model, DKN-01 demonstrates significant inhibition of tumor growth



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DKN-01 activity in combination with 5-FU chemotherapy in colorectal cancer models

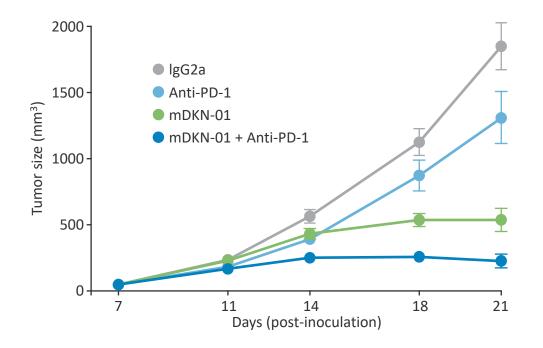
- DKN-01 has efficacy in CRC syngeneic models including SW480
- Additive activity was seen with 5FU chemotherapy
- In a 5FU chemotherapy-resistant model, DKN-01 demonstrates significant inhibition of tumor growth





DKN-01 activity in combination with PD-1 antibody in colorectal cancer model

- DKN-01 has efficacy in CRC syngeneic models including CT26
- Additive activity was seen with an anti-PD-1 antibody



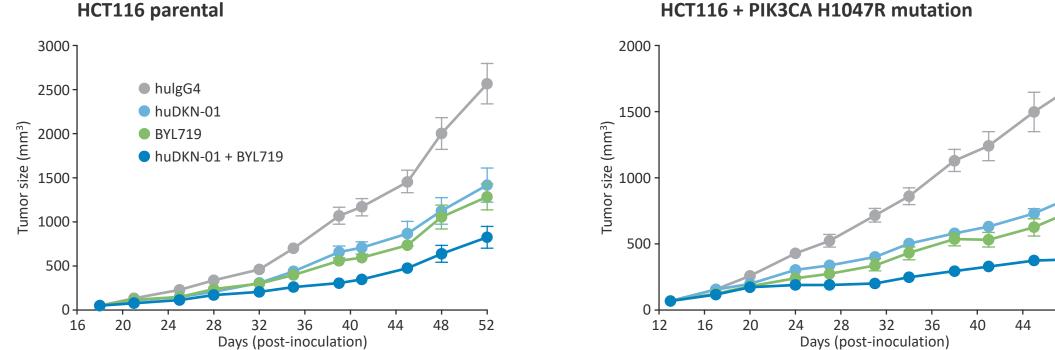
Single Agent Activity

Additive Activity with Anti-PD-1 Antibody



DKN-01 activity in combination with PI3 kinase inhibitor in colorectal cancer models

- DKN-01 has efficacy in CRC xenograft models, including with PIK3CA mutation
- Additive activity was seen with an PI3 kinase inhibitor



HCT116 + PIK3CA H1047R mutation



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DKN-01 colorectal cancer study

Randomized phase 2 study of FOLFIRI/FOLFOX and bevacizumab +/- DKN-01 as second-line treatment of advanced colorectal cancer

/- DKN-01 as second-line treatment of advanced colorectal cancer

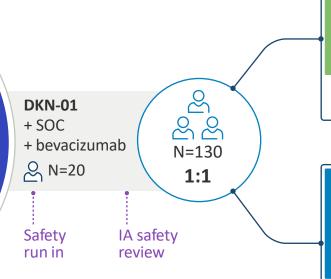
Key eligibility criteria:

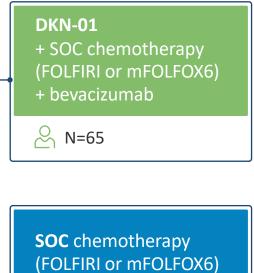
- One prior 5-FU based therapy for advanced colorectal adenocarcinoma
- RECIST v1.1 measurable disease

 MSS and absence of BRAFV600 mutation

Stratification factors:

• DKK1 expression





+ bevacizumab

N=65

2L CRC DKN-01

+ bevacizumab
+ chemotherapy

Primary objective:
 PFS (SOC: mPFS 5.7 mos)

Secondary objectives: – ORR (SOC: ORR 5%) – DoR

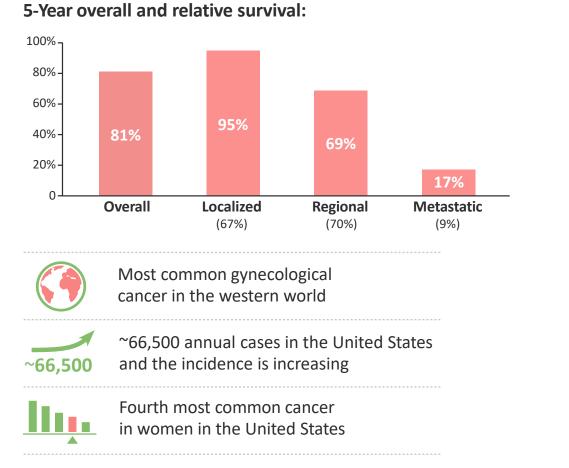
– OS



DKN-01 Endometrial cancer development

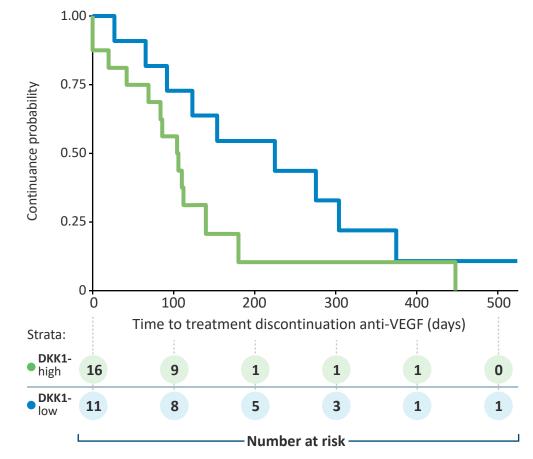


Endometrial Cancer



Clinical risk factors include estrogen-only hormone replacement, obesity, chronic anovulation, tamoxifen therapy, nulliparity, early menarche, and late menopause High DKK1 is associated with poor response to anti-VEGF therapy in endometrioid endometrial cancer patients

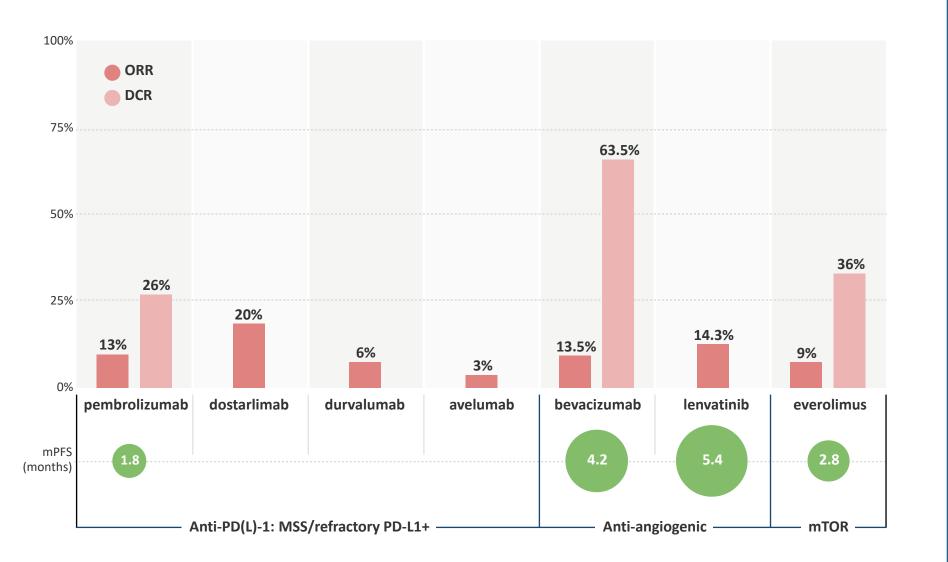






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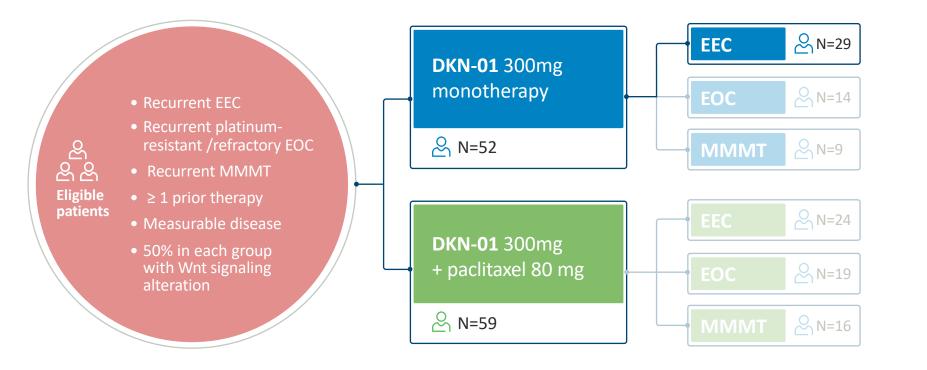
Single agent activity in endometrial cancer



Single agent activity is very low, ranging from 3 - 20%

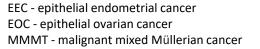


Phase 2 study design evaluating DKN-01 monotherapy and in combination in advanced gynecologic malignancies



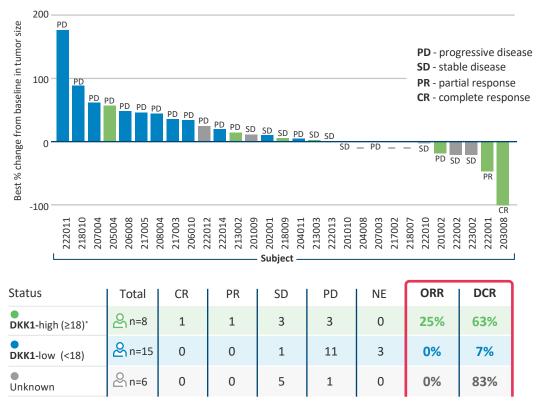
Primary objective:
 Overall response rate
 (ORR)

 Secondary objectives: Exploring genetic mutations in the Wnt signaling pathway and tumoral DKK1 expression as predictive biomarkers





DKN-01 monotherapy - overall response by DKK1 tumoral expression

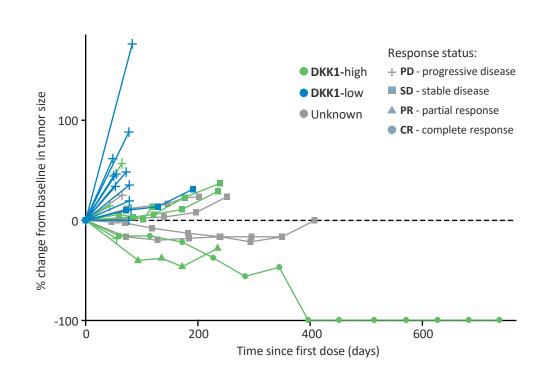


Overall response by DKK1 tumoral expression

*H-score \geq 18, upper tertile of overall study population

DKK1-high tumors have better ORR (25% vs. 0%) and clinical benefit (63% vs. 7%)

Patients with unknown DKK1 expression include 3 patients with durable SD and Wnt activating mutations



DKK1-high patients have longer progression-free survival (4.3 vs. 1.8 months [HR 0.26; 95 CI: 0.09, 0.75])



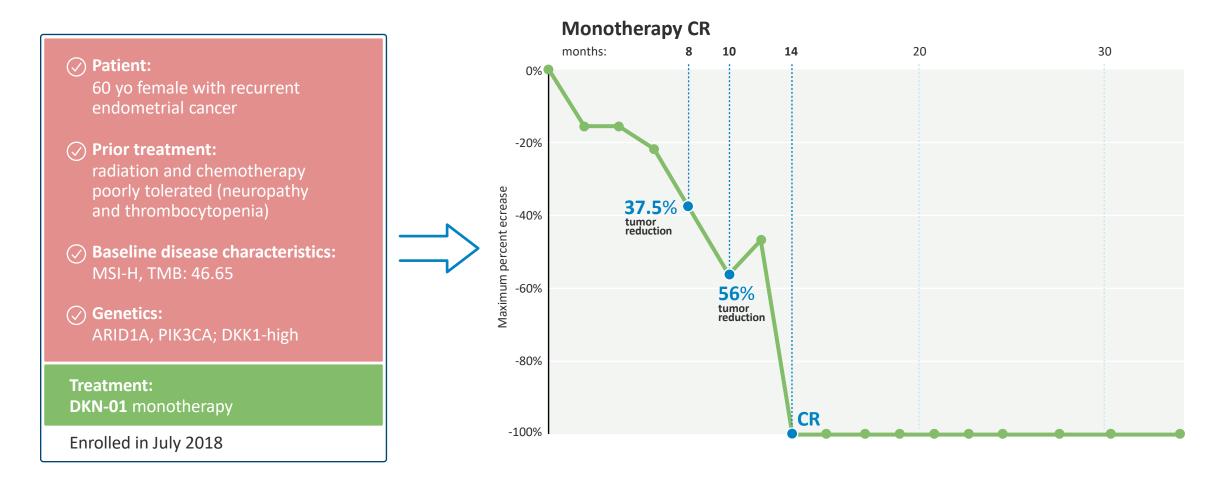
2L+ EEC DKN-01

+ monotherapy

Durable clinical benefit in DKK1-high tumors

Complete response in endometrial cancer patient on DKN-01 monotherapy

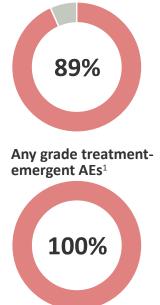
2L+ EEC DKN-01 + monotherapy





Pembrolizumab + lenvatinib in second-line endometrial cancer

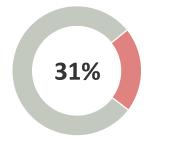
Grade ≥3 treatmentemergent AEs¹



most common AE's with Lenvima + Keytruda treated patients:

hypertension (64.0%), hypothyroidism (57.4%), diarrhea (54.2%), nausea (49.5%), decreased appetite (44.8%), vomiting (36.7%), weight decrease (34.0%), fatigue (33.0%), arthralgia (30.5%), proteinuria (28.8%), anemia (26.1%), constipation (25.9%), urinary tract infection (25.6%).

Lenvima discontinuation¹



Keytruda discontinuation 19%^{1,2}: Most common AE's leading to discontinuation of Keytruda: adrenal insufficiency, colitis, pancreatitis and muscular weakness (2% each).

AE's leading to interruption of Keytruda (49%)²:

fatigue (14%), diarrhea, and decreased appetite (6% each), rash (5%), renal impairment, vomiting, increased lipase, decreased weight (4% each), nausea, increased blood alkaline phosphatase, and skin ulcer (3% each), adrenal insufficiency, increased, amylase, hypocalcemia, hypomagnesemia, hyponatremia, peripheral edema, musculoskeletal pain, and syncope (2% each).

AE's leading to reduction or interruption of Lenvima (88%)²:

fatigue (32%), hypertension (26%), diarrhea (18%), nausea, palmar-plantar erythrodysesthesia, vomiting (13% each), decreased appetite (12%), musculoskeletal pain (11%), stomatisis (9%), abdominal pain, herorrhades (7% each), renal impairment, decreased weight (6% each), rash, headache, increased lipase, and proteinuria (5% each).

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	Fatal	adverse	reactions ¹
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Including gastrointestinal disorders: cardiac disorders: 0.5%, general disorders: 1.5%, infections: 0.7%, decreased appetite: 0.2%, neoplasms, nervous system, psychiatric, renal, reproductive, or respiratory disorders: 0.2% each.

	Population:		ORR	CR	PR	SD	mPFS
Lenvima + Keytruda KN-775	Post platinum-based therapy, all-comers (dMMR + pMMR)	<u> </u>	31.9%	6.6%	25.3%	47.0%	7.2 months
	Post platinum-based therapy pMMR	<u> 응</u> 346	30.3%	5.2%	25.1%	48.6%	6.6 months

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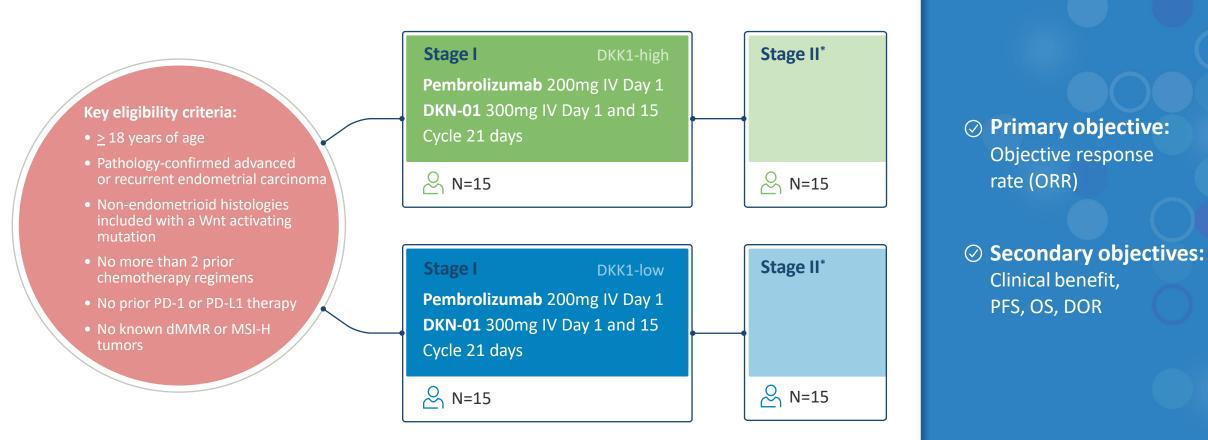
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¹KEYNOTE-775 data presented at SGO 2021

²FDA Approves LENVIMA[®] (lenvatinib) plus KEYTRUDA[®] (pembrolizumab) Combination Treatment for Patients with Certain Types of Endometrial Carcinoma. *https://www.eisai.com/news/2019/news201967.html*

DKN-01 plus pembrolizumab endometrial cancer study

2-3L EEC DKN-01 + pembrolizumab



Open-label, phase 2 trial,

Bayesian optimal phase II design,

Investigator-initiated study with pembrolizumab supplied by Merck.





DKN-01 Prostate cancer development



DKK1 and DKN-01 in prostate cancer

DKN-01 has efficacy **DKK1** expression is regulated **CIBERSORT** analysis shows DKK1 expression by AR in CRPC tumor biopsies associated with reduced inflammatory infiltrate in a PC3 SCID xenograft Active Inactive CD8+T cells 10 1000-NK cells NK cells DKK1 mRNA expression (log2 FPKM) ר 0.02% ו ר %80.0 ך 0.10% 800 5 p< 0.005 p < 0.005 p< 0.05 Isotype 1 DKN-01 600· 0 0.05% 0.01% -0.04% 400 -5 200 p< 0.0001 -10 0% 0% 0% 1 2 3 4 1 2 3 4 1 2 3 4 12 AR+ AR-AR+ AR-0 4 8 — NE- — NE+ Quartile of DKK1 Quartile of DKK1 DKK1 Days post treatment quartile expression expression CRPC

DKK1

low

DKK1

high

leaptherapeutics

16

20

*P < 0.0001

24

28



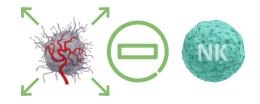
Investigator-initiated study in advanced metastatic castration-resistant prostate cancer (mCRPC)



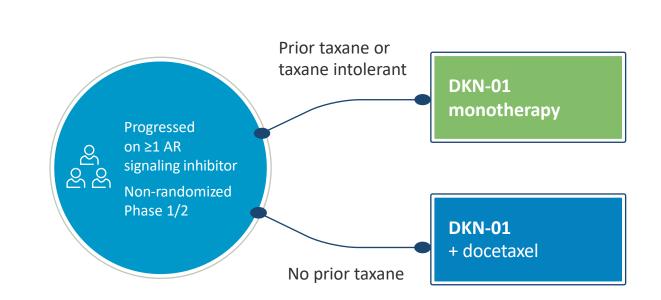




DKK1 is upregulated in prostate cancers with low Androgen Receptor (AR) expression.



DKN-01 delays prostate cancer growth in pre-clinical models in an NK-cell dependent manner.





Investigator-initiated study in advanced metastatic castration-resistant prostate cancer (mCRPC)

Baseline characteristics:

DKN-01 + Docetaxel	300mg N/A & N=4	600mg N/A & N=3	300mg 75mg/m² & N=3	600mg 75mg/m² & N=3
Age	64.5	74	66	68
Adenocarcinoma, n (%)	4 (100%)	3 (100%)	3 (100%)	1 (33%)
Neuroendocrine carcinoma, n (%)	0	0	0	2 (67%)
Aggressive variant (AVPC), n (%)	1 (25%)	0	1 (25%)	3 (100%)
APC mutation, n (%)	1 (25%)	1 (33%)	1 (33%)	0
CTNNB1 mutation, n (%)	0	2 (67%)	0	0

Safety data overview:

- No DKN-01 related
 Grade ≥ 3 adverse events
 occurred in either cohort
- No unexpected docetaxel-related Grade ≥ 3 AEs were observed

2L+ mCRPC

+ docetaxel

DKN-01

DKK1 expression in 42% of samples tested:

DKK1 expression	<mark></mark> N=24
H-score 0	15 (58.3%)
H-score ≥1	10 (41.7%)
H-score ≥10	5 (20.8%)
H-score ≥35	3 (12.5%)

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Primary endpoint: of the phase 1 dose escalation cohorts was safety, characterized by dose-limiting toxicity (DLT).

⊘ Secondary endpoints:

of the study was to correlate anti-tumor activity, DKK1 expression (cutoff H-score ≥ 1), and clinical evidence of aggressive variant prostate cancer (AVPC).



DKN-01 activity in advanced mCRPC patients

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Combination with docetaxel

DKN-01 300mg plus docetaxel
 DKN-01 600mg plus docetaxel

	Monotherapy 온 N=7	Combination 온 N=6
PR - partial response	0	5 (83.3%)
SD - stable disease	2 (28.6%)	0
PD - progressive disease	3 (42.9%)	0
NE - non-evaluable	2 (28.6%)*	1 (16.7%)*

1 NE patient in each group had no measurable disease at baseline

2L+ mCRPC DKN-01 + docetaxel Perimutter Cancer Center

All 5 evaluable DKN-01 plus docetaxel patients had a RECIST partial response (3 confirmed, 2 unconfirmed)

Confirmed responses in 2 of 3 patients with AVPC

KEYNOTE-365 (cohort B), pembrolizumab plus docetaxel: 23% confirmed ORR by RECIST in evaluable patients

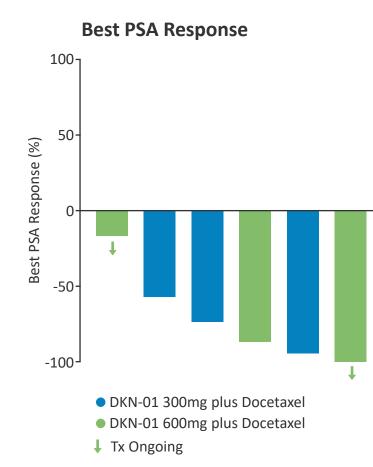


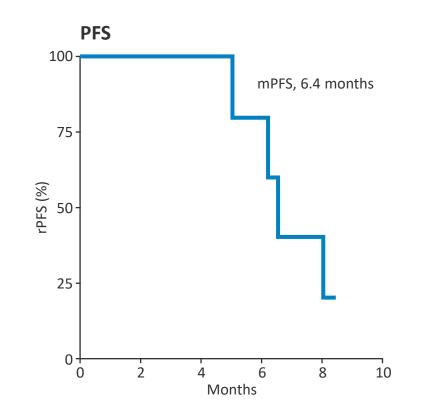


DKN-01 activity in combination with docetaxel

2L+ mCRPC DKN-01 + docetaxel

Perimutter Cancer Center





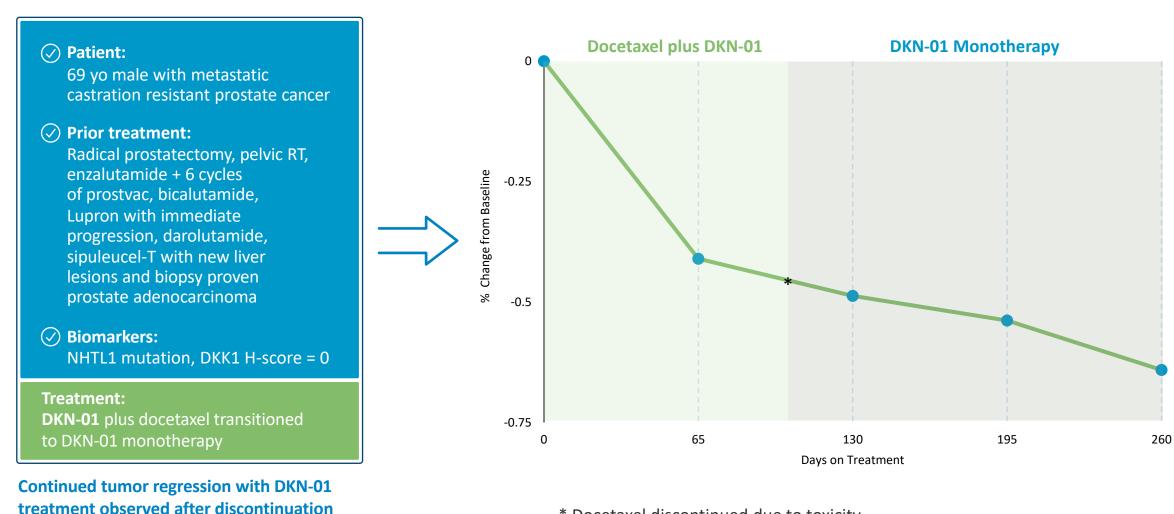
rPFS (n=6) pts treated with DKN-01 plus Docetaxel.

All 6 DKN-01 plus docetaxel patients have had a PSA50 response (6th patient PSA50 response post-data cut)

KEYNOTE-365 (cohort B), pembrolizumab plus docetaxel: 34% PSA50 response



Confirmed partial response with deepening of response on monotherapy



* Docetaxel discontinued due to toxicity



46

of docetaxel

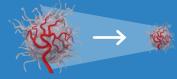
DKN-01 highlights in prostate cancer



Non-clinical studies identified DKK1 as being upregulated in prostate cancers with low Androgen Receptor expression and that inhibition of DKK1 delayed prostate cancer growth



DKN-01 in combination with docetaxel showed promising clinical responses in unselected patients by both RECIST and PSA50 criteria



Clinical activity was particularly promising in patients with Aggressive Variant Prostate Cancer



Retrospective correlation of anti-tumor activity with biomarker status is ongoing

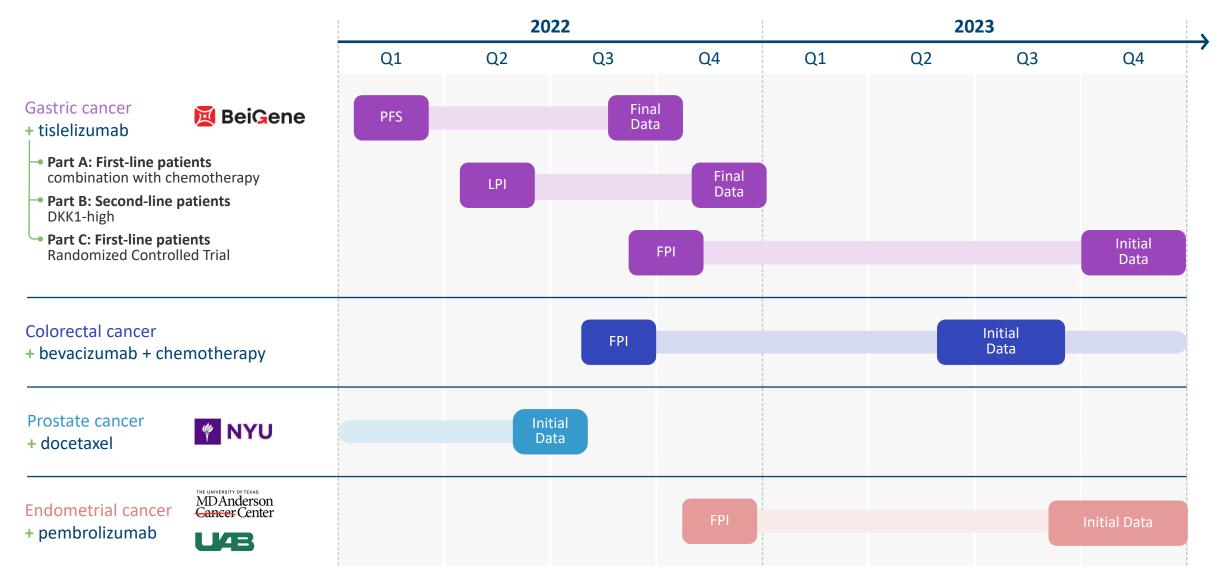


DKN-01 DEVELOPMENT STRATEGY

2022-2023 Milestones



Leap 2022-2023 clinical milestones





QUESTIONS & ANSWERS

