ZN-c3 WEE1 Data Review KOL Event

April 12, 2021

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Data of Fulvestrant, RAD1901, Abemaciclib, Alpelisib, AZD1775, Venetoclax and Osimertinib presented in this presentation is based on evaluation of comparable proxy chemical compounds purchased from commercial sources rather than the pharmaceutical company commercializing or developing, as applicable, the compound.

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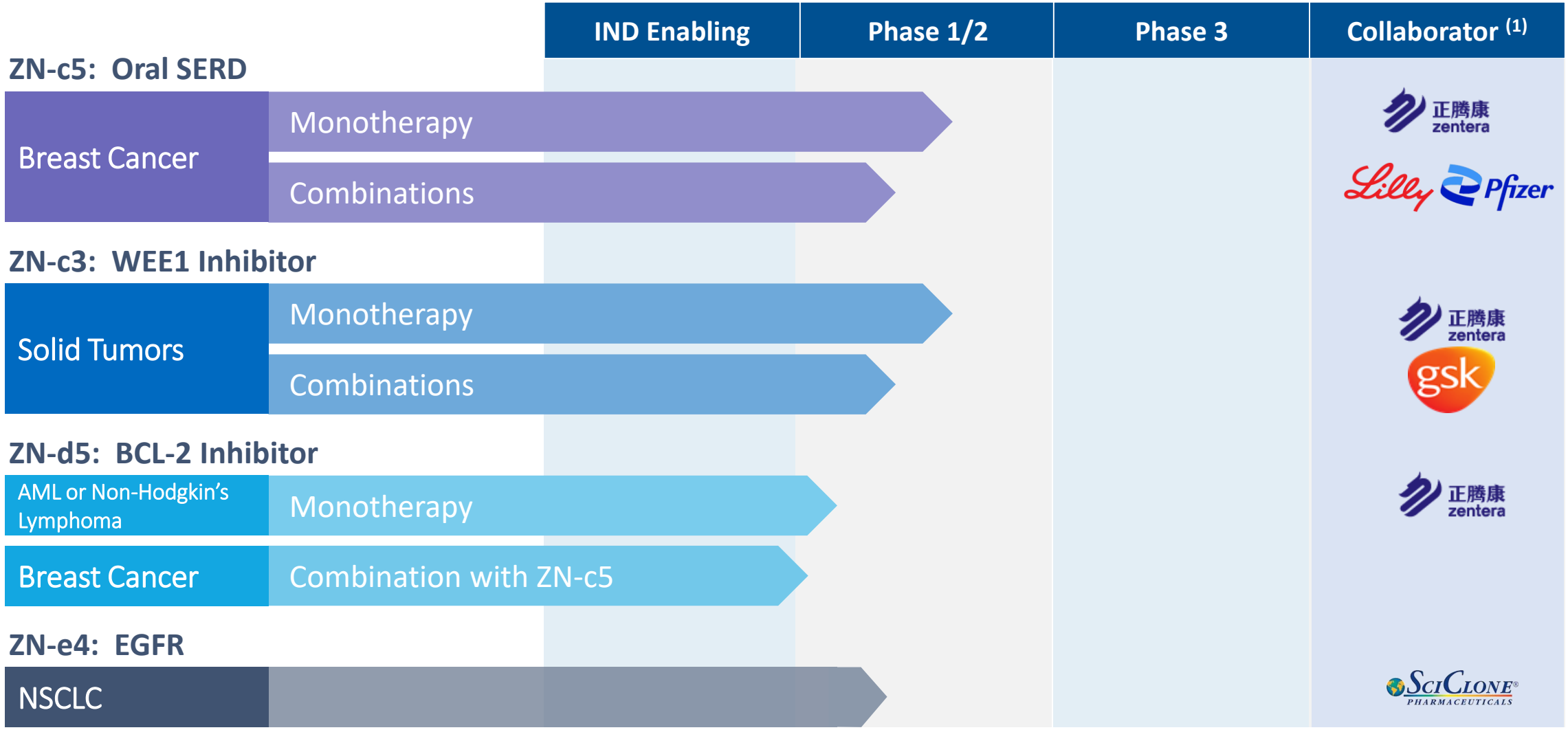
Broad Oncology Pipeline Designed to Improve Patient Outcomes



(1) Zentalis is currently evaluating ZN-c5 in combination with palbociclib (Ibrance®), as part of a clinical research collaboration with Pfizer, evaluating ZN-c5 in combination with abemaciclib (Verzenio®), as part of a clinical research collaboration with Lilly. Zentalis intends to evaluate ZN-c3 in combination with niraparib (ZEJULA®), as part of a clinical research collaboration with GlaxoSmithKline. Zentalis maintains full ownership of ZN-c5 and ZN-c3 in each such collaboration. SciClone has development and commercial rights to ZN-e4 in Greater China (including Macau and Hong Kong), South Korea, Taiwan and Vietnam. Zentera, our majority-owned joint venture, has development and commercial rights to ZN-c5, ZN-c3 and ZN-d5 in select Asian countries (including China). Zentera submitted INDs in China for each of ZN-c5 and ZN-c3 and intends to submit an IND in China ZN-d5 in 2021.

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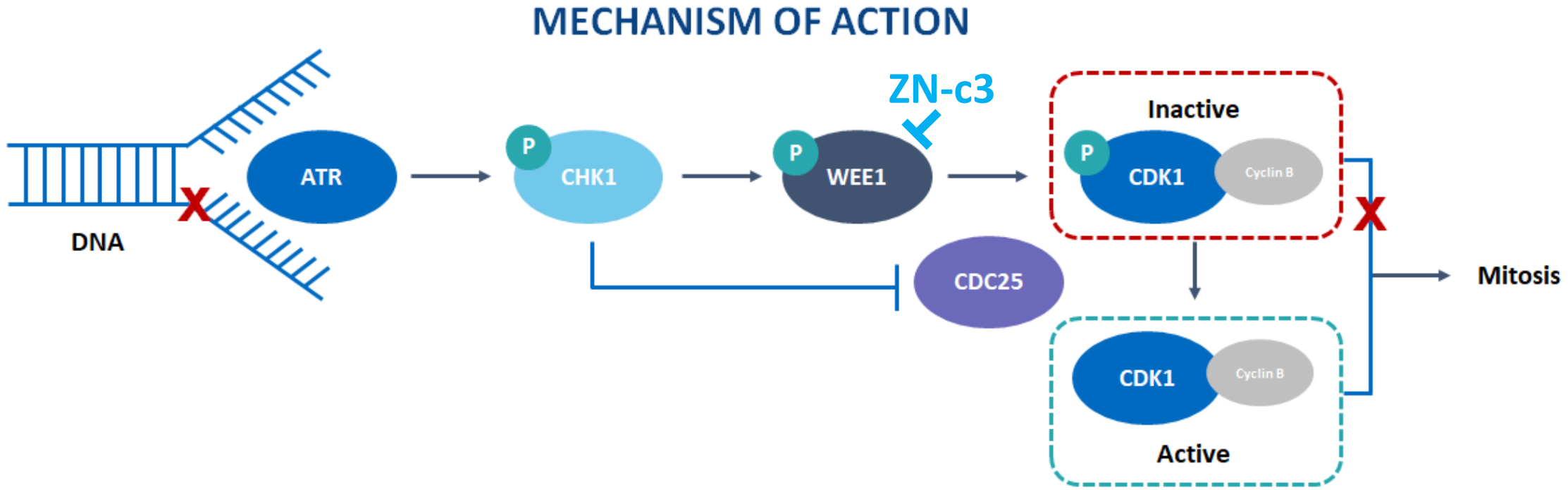
ZN-c3: WEE1 Inhibitor

ZN-c3: A DNA Damage Response (DDR) Drug Candidate



- WEE1 is a protein kinase expressed at high levels in many cancer types that prevents entry into mitosis in response to DNA damage by regulating the G2 checkpoint
- WEE1 inhibition causes cancer cells to proceed to mitosis without repairing DNA damage, resulting in premature mitotic entry and apoptosis
- ZN-c3 has demonstrated significant growth inhibition and induced apoptosis *in vitro* and anti-tumor activity *in vivo*

Source: Drawing based on Targeting WEE1 Kinase in Cancer. Matheson CJ, et al. Trends Pharmacol Sci. 2016

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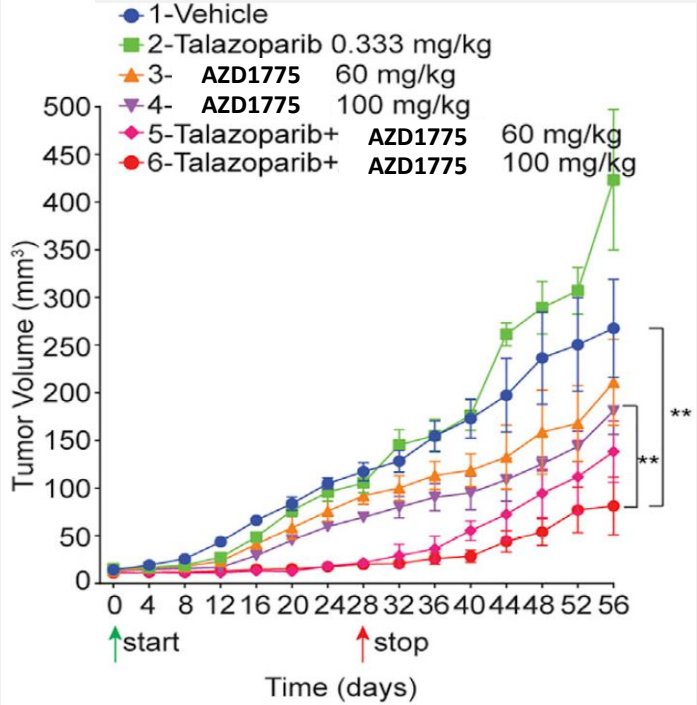
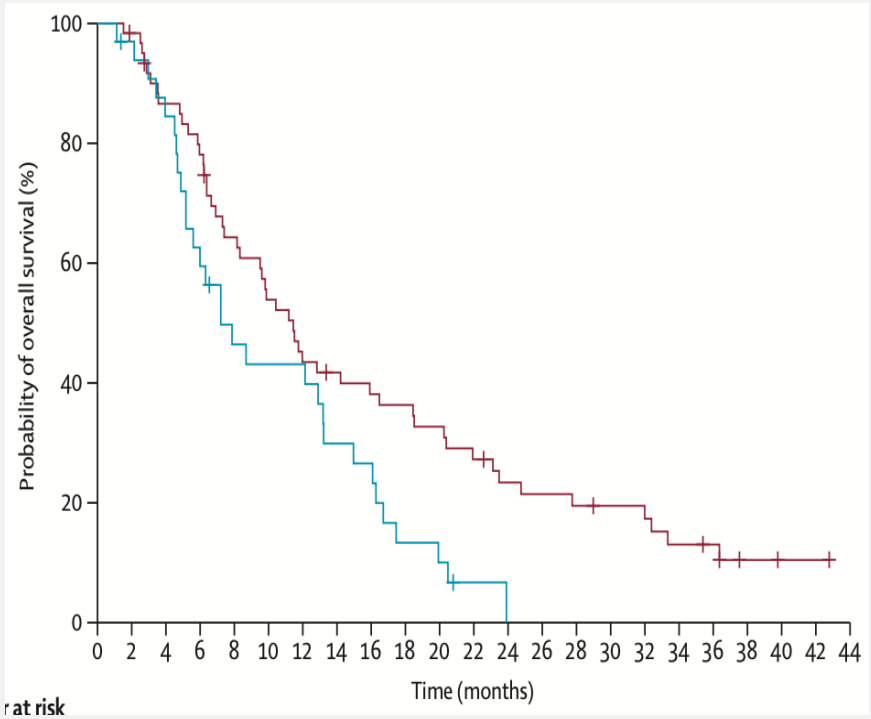
WEE1 Inhibitors Show Strong Preclinical Activity and Clinical Responses

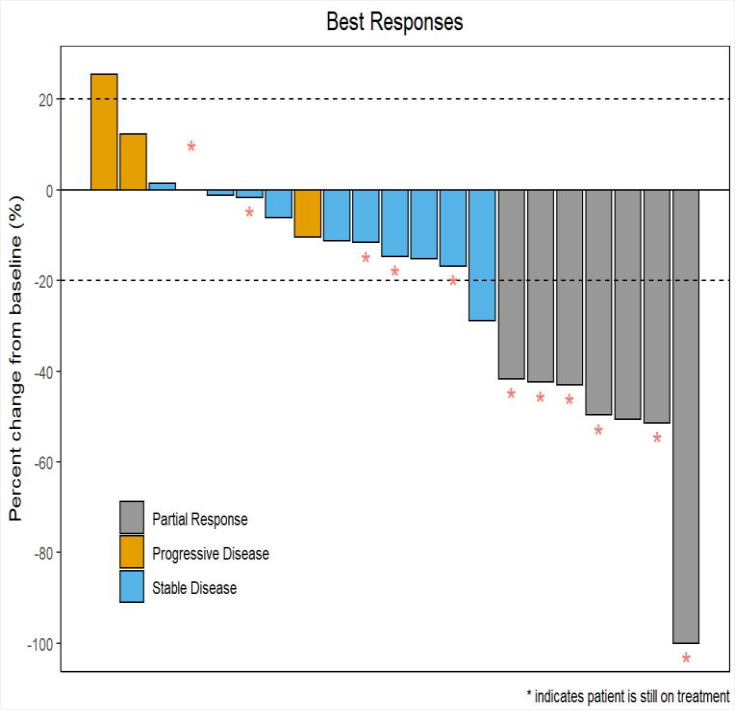
Combination of WEE1 and PARP Inhibitors Showed Improved Anti-Tumor Activity Compared to the Use of Each as Monotherapy (1)



Phase II Study of WEE1 Inhibitor Plus Gemcitabine for Platinum-Refractory Recurrent Ovarian Cancer: Double-Blind, Randomized, Placebo-Controlled(2)



Phase II Trial of WEE1 Inhibitor in recurrent Uterine Serous Carcinoma (USC) (3,4)



(1) Fang, Y. Cancer Cell (2019). A total of 2 x 10^6 OVCAR8 ovarian cancer cells were injected subcutaneously (s.c.) and grown for 2 weeks in nude mice. Mice were randomized with six in each group and treated as indicated. Average tumor volume ± SEM are displayed. p value: one-way ANOVA. **p < 0.01

(2) Lheureux S., Lancet (2021). Addition of a WEE1 to Gemcitabine shows a statistically significant improvement in mOS over Gemcitabine with placebo (HR=0.56, P=0.017)

(3) Liu, J.F. AZD1775 SGO Presentation (2020)

(4) An aggressive subtype of endometrial carcinoma characterized by frequent TP53 mutations (>90%)

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ZN-c3: Excellent Potency, PK and Preclinical Activity

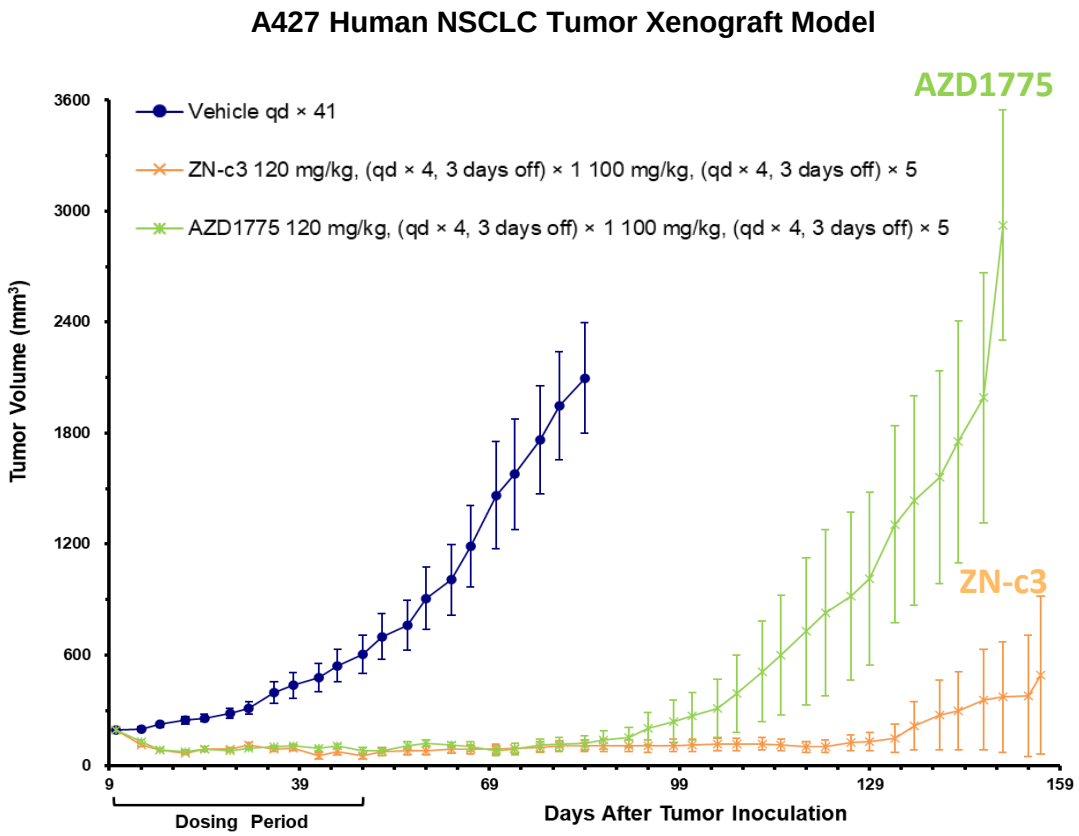
ZN-c3 Anti-Proliferative Activity in a Panel of Cell Lines

Compound ID	CTG IC_{50}(nM)							
	NSCLC		SCLC		TNBC		Ovarian cancer cells	
	NCI-H23	A-427	DMS-53	NCI-H1048	MDA-MB-231	HCC 1806	OVCAR3	UWB 1.289
ZN-c3	124	88	118	92	190	95	69	54
AZD1775[(1)]	108	94	130	97	233	94	124	57

Improved Tumor Concentration in Preclinical Models

Study (A-427 NSCLC)	ZN-c3			AZD1775 [(1)]		
Dose (mg/kg/day)	20	40	80	20	40	80
C_{max} (ng/mL)	1,167	1,997	5,100	635	2,460	4,703
T_{max} (hr)	1	1	1	1	1	1
$AUC_{0\text{-}24hr}$ (ng·hr/mL)	4,863	17,088	39,722	1,494	6,313	13,408
Tumor Conc. (ng/mL)	**10.5**	**48.0**	**811**	**BQL[(2)]**	**BQL**	**6.95**

ZN-c3 Induced Prolonged Tumor Growth Delay



(1) AZD1775 data based on evaluation of comparable proxy chemical compound purchased from commercial sources rather than obtained from the pharmaceutical company developing the compound.

(2) BQL: Below Quantifiable Level

Note: ZN-c3 has excellent thermodynamic solubility of 2132 µM (vs. 60 µM for AZD1775) based on internal data

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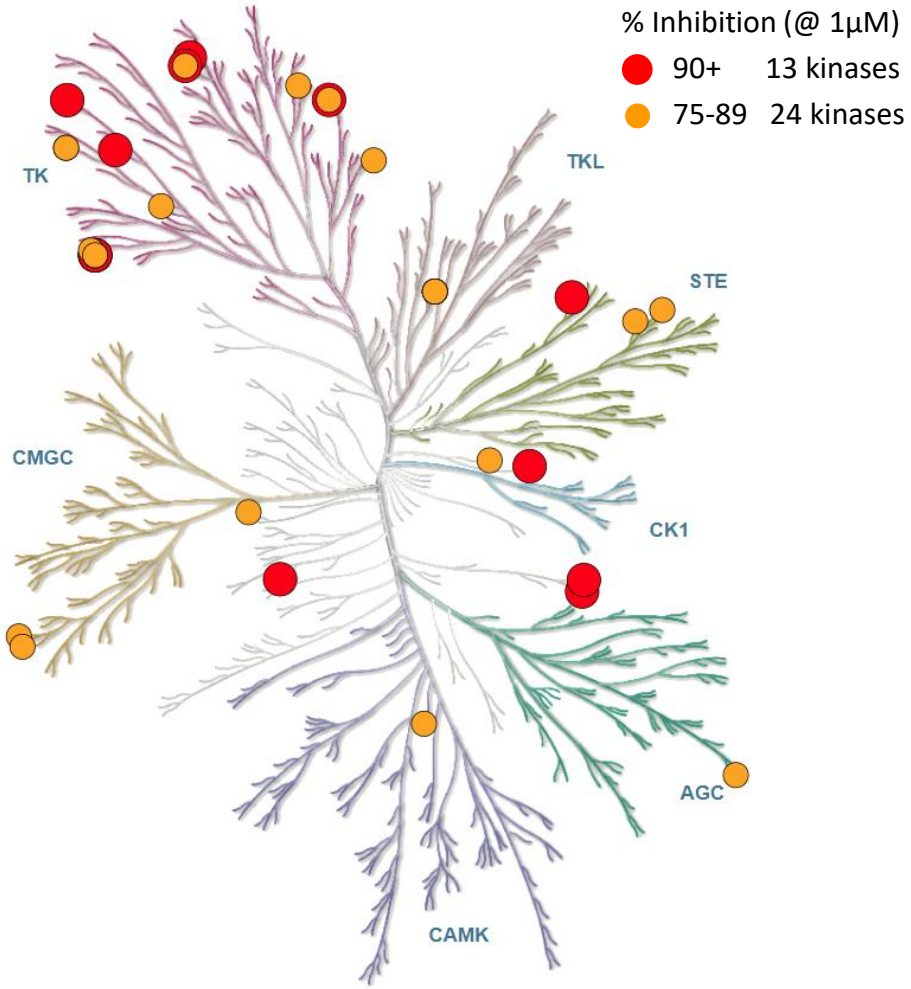
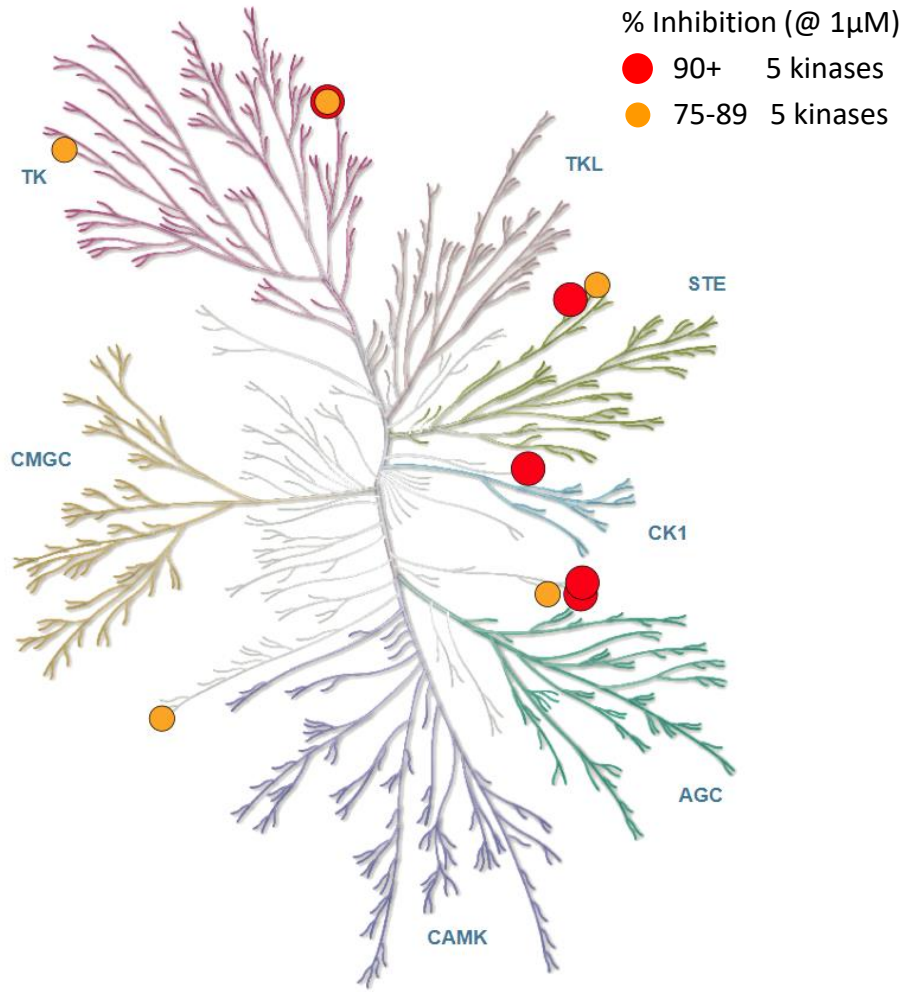
ZN-c3: Differentiated Selectivity Profile in >470 Kinase Screening Panel

AZD1775 (1)



ZN-c3



(1) AZD1775 data based on evaluation of comparable proxy chemical compound purchased from commercial sources rather than obtained from the pharmaceutical company developing the compound
(2) Illustrations reproduced courtesy of Cell Signaling Technology, Inc. (www.cellsignal.com)

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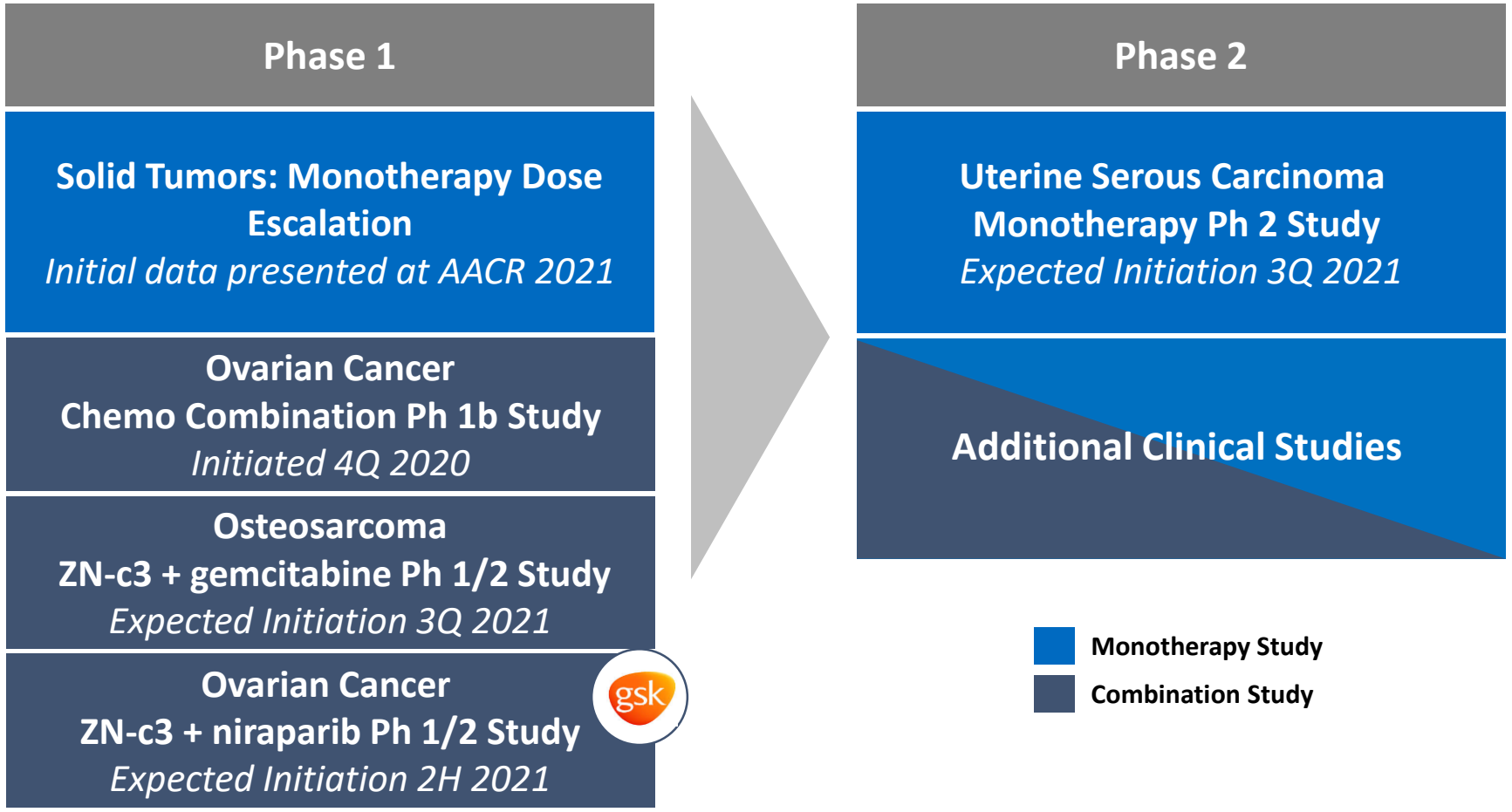
ZN-c3: Comprehensive Clinical Development Plan

Ongoing and Planned Clinical Programs



Overview

- Initial Phase 1 monotherapy dose escalation data reported at AACR 2021
- ZN-c3 was safe and well-tolerated as a single agent
- RP2D for ZN-c3 determined
- ZN-c3 showed Exceptional Responses in heavily pretreated subjects with advanced solid tumors
- Corresponding studies with Zentera in Greater China

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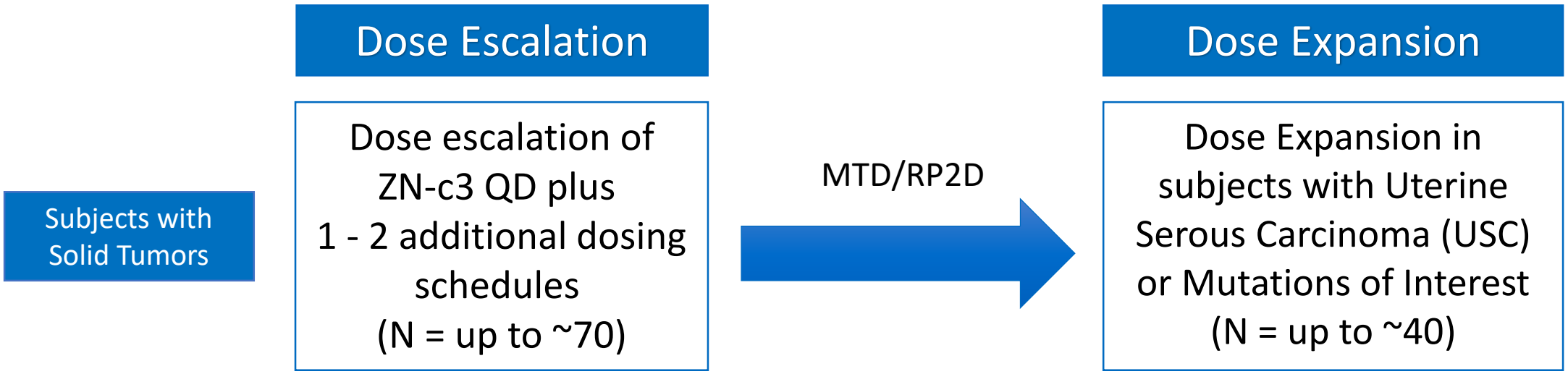
Initial Results of ZN-c3 Phase 1 Monotherapy Dose Escalation Trial

ZN-c3 Study: Schema and Endpoints



Study Objectives include:

- Safety and tolerability of ZN-c3, determination of maximum tolerated dose (MTD) based on a CRM model, and recommended Phase 2 dose (RP2D)
- Clinical activity according to RECIST v 1.1: ORR, DOR, PFS, CBR
- Plasma pharmacokinetics (PK) of ZN-c3
- Evaluation of exploratory biomarkers

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ZN-c3 Study: Inclusion / Exclusion Criteria

Key Inclusion:

- Subjects must have a solid tumor with advanced or metastatic disease, refractory to standard therapy or for whom no standard therapy is available, or the subject is ineligible for standard therapy
- Eastern Cooperative Oncology Group (ECOG) performance status ≤2
- Measurable or evaluable disease per RECIST version 1.1

Key Exclusion:

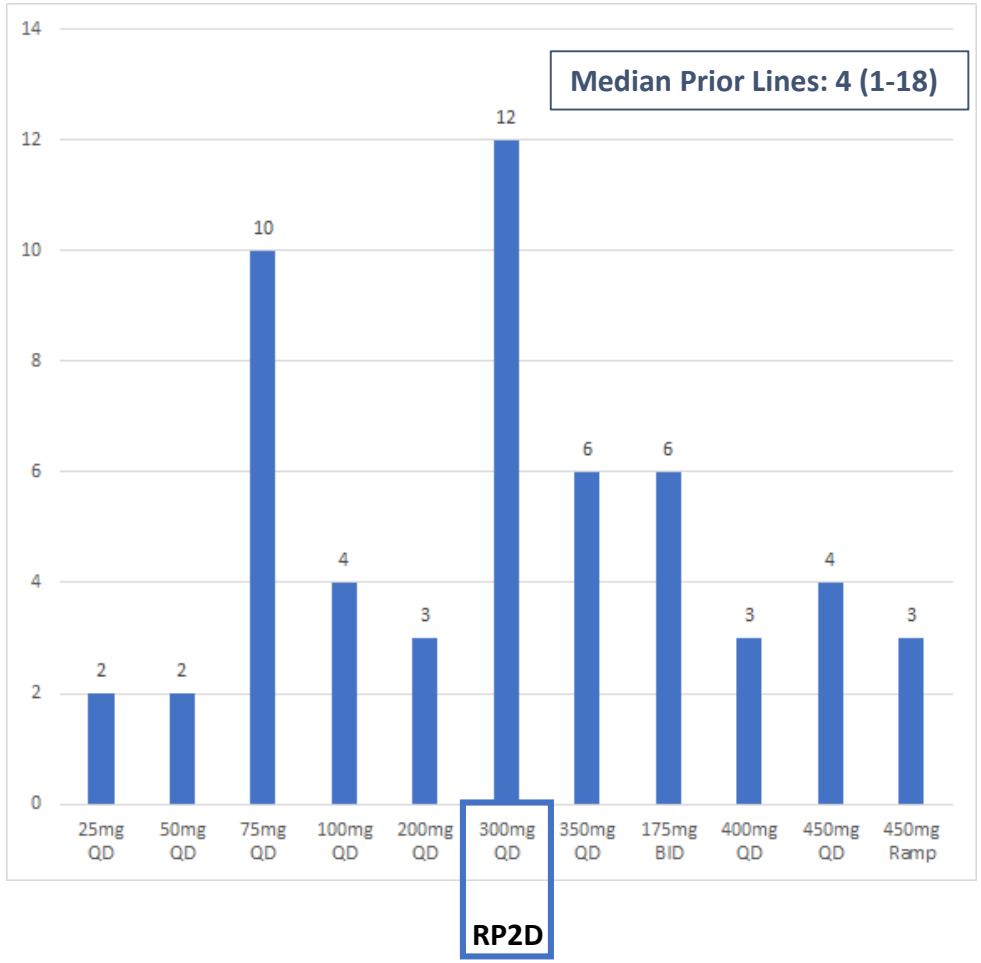
- Major surgery within 28 days, radiation therapy within 21 days, stem cell transplant within 3 months, or serious illness/medical condition
- Hypersensitivity to any drugs similar to ZN-c3, or prior therapy with a WEE1 inhibitor

ZN-c3 Study: Dose Cohorts, Dose Frequency, Number of Subjects Enrolled and Cancer Types (as of 02/12/2021)

Dosing Cohorts, Gender and Cancer Type

ZN-c3 Dose in mg	Males	Females	Cancer Types (Primary)
25 QD	0	2	Lung (2)
50 QD	1	1	Breast, Colon
75 QD (Expansion Cohort)	5	5	Bladder, Breast (2), Colon (3), Endometrium, Gall Bladder, Pancreas, Prostate
100 QD	3	1	Breast, Prostate (2), Testis
200 QD	1	2	Endometrial Serous Carcinoma, Rectum, Prostate
300 QD (Expansion Cohort)	6	6	Ampulla of Vater, Breast, Colon (2), Kidney, Lung, Ovary, Prostate (2), Retroperitoneum, Uterus (2)
175 BID	2	4	Ampullary Invasive, Breast, Colon, Ovary, Pancreas, Prostate
350 QD	3	3	Colon (2), Gastric (2), Pancreas, Uterus
400 QD	2	1	Biliary Tract, Colon, Pancreas
450 QD	3	1	Colon (2), Lung, Uterus
450 QD Ramp Up	1	2	Lung, Pancreas, Prostate

Dosing Cohorts, Frequency and # of Subjects



Monotherapy Responses for Representative Agents

Untargeted, All-Comer

- AZD1775 (WEE1 inhibitor)
- Metastatic Solid Tumor study
- N=21
- 2 PRs (9.5%)[1]
  Responses only in BRCA mutants

Average Expected Response Rates = 6.5%[2]

Targeted

- Larotrectinib (Trk inhibitor)
- Metastatic Solid Tumor study
- 8/8 PRs (100%) in NTRK fusion[3]
- Zero responses in 62 patients (0%) who were NTRK-

Expected Response Rates = 18-78%[4]

(1) Do Kh et al. Journal of Clinical Oncology. 2015
(2) Chakiba C et al. Journal of Clinical Oncology. 2016
(3) Hong DS et al. Annals of Oncology. 2019
(4) Gyawali B et al. JNCCN. 2020

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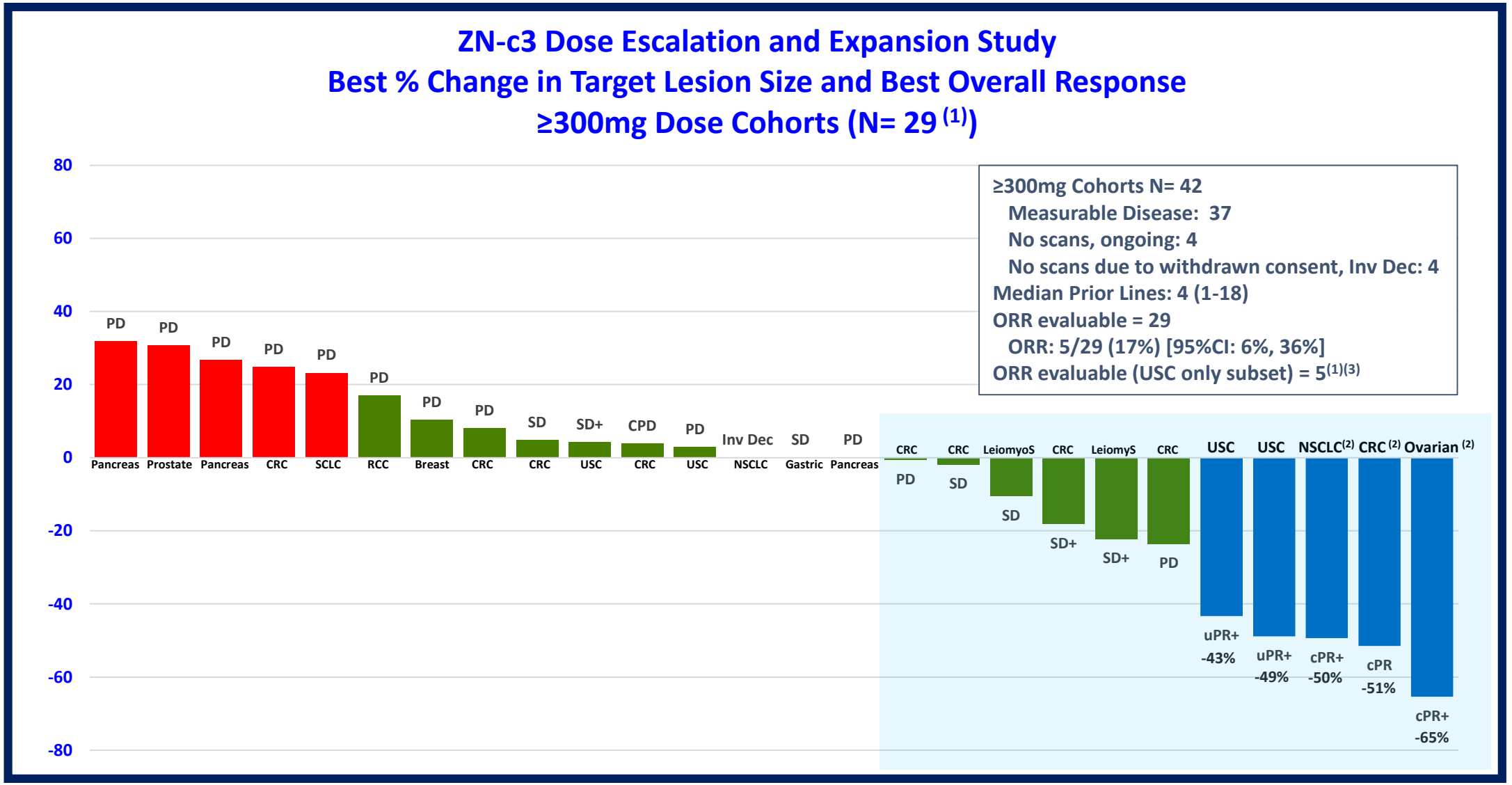
ZN-c3 Study: Initial Waterfall Plot (Updated 03/01/2021)



(1) 3 subjects with no treatment scans (CRC, USC, Pancreas), and experienced clinical progressive disease (CPD). + denotes treatment ongoing
(2) 3 confirmed Exceptional Responders PRs, including an additional confirmation of Exceptional Responder PR since AACR Presentation Press Release
(3) Updated as of 03/15/2021

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ZN-c3 Study: Exceptional Responders on Single Agent ZN-c3

Initial Results from ZN-c3 Study

- Preliminary evidence of rapid, single agent clinical activity in heavily pretreated patients generating Exceptional Responses
- PRs also in tumor types not expected with WEE1 monotherapy (e.g., non-USC or BRCA1/2 WT patients)
- At the time of the data cutoff on March 1, 2021, 5 subjects with best overall response of Partial Response (PR) by RECIST v1.1:
  - 3 confirmed Exceptional Responder PRs(1) in multiple tumor types (ovarian cancer, CRC, NSCLC)
  - 2 unconfirmed PRs in USC
- RP2D 300mg QD with continuous dosing

Exceptional Responses were observed in non-USC patients who had experienced up to 18 prior lines of treatment and no recent responses

(1) Additional confirmation of Exceptional Responder PR since AACR Presentation Press Release

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Exceptional Responders: Who Are They?

Who is an Exceptional Responder?

OXFORD

JNCI J Natl Cancer Inst (2021) 113(1): djaa061

doi: 10.1093/jnci/djaa061
First published online April 27, 2020
Article

The Exceptional Responders Initiative: Feasibility of a National Cancer Institute Pilot Study

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"NCI selected those that fit specific criteria [for an Exceptional Responder]: The patient's tumors shrank or disappeared in response to a drug that worked for less than 10% of patients overall in a clinical trial. Or the patient had a response that lasted at least three times longer than it had for a typical patient."

- Harold Varmus, Weill Cornell Medicine

Characteristics of an Exceptional Response

- Unexpected
- Rapid
- Durable

Exceptional Responses are generally observed randomly, and the underlying driver of response is often unknown

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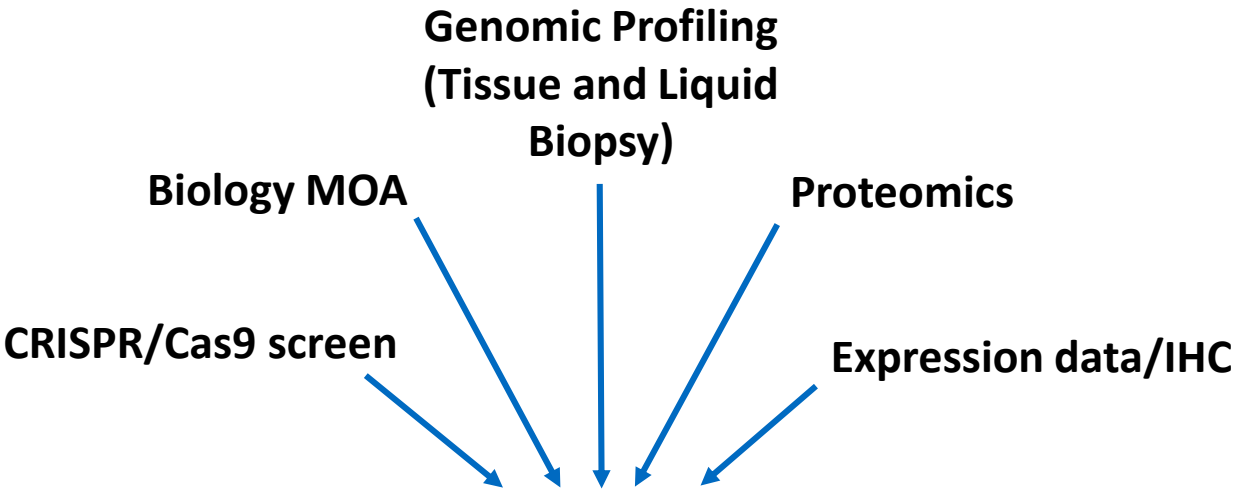
Exceptional Responders Exhibit Unique Biological Features

Zentalis Predictive Biomarker Approach



Unique and Predictive Biomarker Profile

- **Prospective Identification of "Exceptional Responders"**
- **Addresses High Unmet Clinical Need and Meaningful Patient Populations**
- **Indication Agnostic**
- **Straightforward Development of Companion Diagnostic**

Confirming Biomarker Profile

- Zentalis has observed, at this initial stage of the ZN-c3 study at the time of the data cutoff on March 1, 2021, multiple Exceptional Responses on single agent ZN-c3 (3/3 patients or 100% ORR)
- Activity in tumor types (e.g., CRC) not previously seen by other WEE1 inhibitors
- In addition: Partial Responses seen in USC patients
- Zentalis Predictive Biomarker approach used to confirm unique, novel and predictive profile

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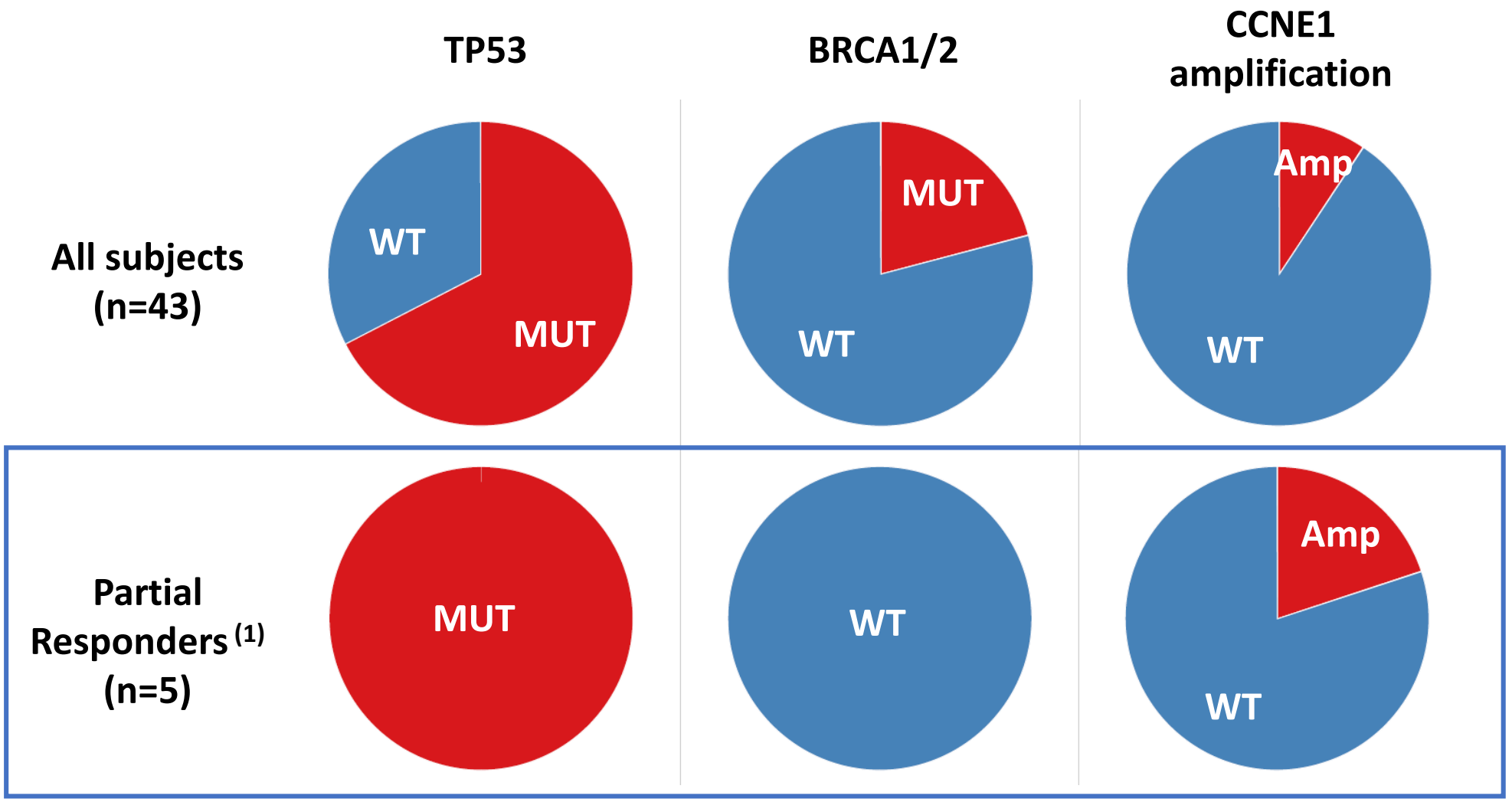
Summary of Relevant Genomic Backgrounds



(1) Includes 3 Exceptional Responder cPRs (one additional confirmation of Exceptional Responder PR since AACR Presentation Press Release) and 2 USC uPRs

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Exceptional Responder #1: First PR seen in ≥3 lines

Exceptional Responder #1 Summary

- 63-year-old White male, Stage IV CRC, metastases to the liver, lymph nodes, and pleura. ECOG PS 1
- Heavily pretreated with 5 prior lines of therapy (see table)
- ZN-c3 starting dose: 450 mg QD on August 18th, 2020
  - Dose reduced to 300 mg QD on D32 due to Gr 3 neutropenia, then 200 mg QD (5/2) on D77 due Gr 2 nausea, vomiting and Gr 1 diarrhea
- TP53 mutant. BRCA1/2 negative. CCNE1 amp negative
- Duration on study: 169 days (5.6 months), off study now due to progressive disease

Confirmed PR with 51% reduction overall (updated 03/01/21);
First PR seen in ≥3 lines

Previous Therapy Experience

Intent of Treatment	Regimen	Start	Stop	Best response
Advanced / Metastatic	Bev / 5FU / LV	20/Jun/2018	28/May/2019	Unknown
Advanced / Metastatic	Irinotecan / 5FU / LV / Bev	24/Jul/2019	31/Dec/2019	Unknown
Advanced / Metastatic	MK0482	30/Jan/2020	12/Mar/2020	PD
Advanced / Metastatic	ABBV181 / ABBV151	15/Apr/2020	13/May/2020 27/May/2020	PD
Advanced / Metastatic	AGEN2373	1/Jul/2020	1/Jul/2020	PD

Bev: Bevacizumab, 5FU: Fluorouracil, LV: Leucovorin, PD: Progressive disease
AGEN2373: anti-CD137 AB, ABBV181: PD-1 inhibitor, ABBV151: GARP- TGF-β1 MAB

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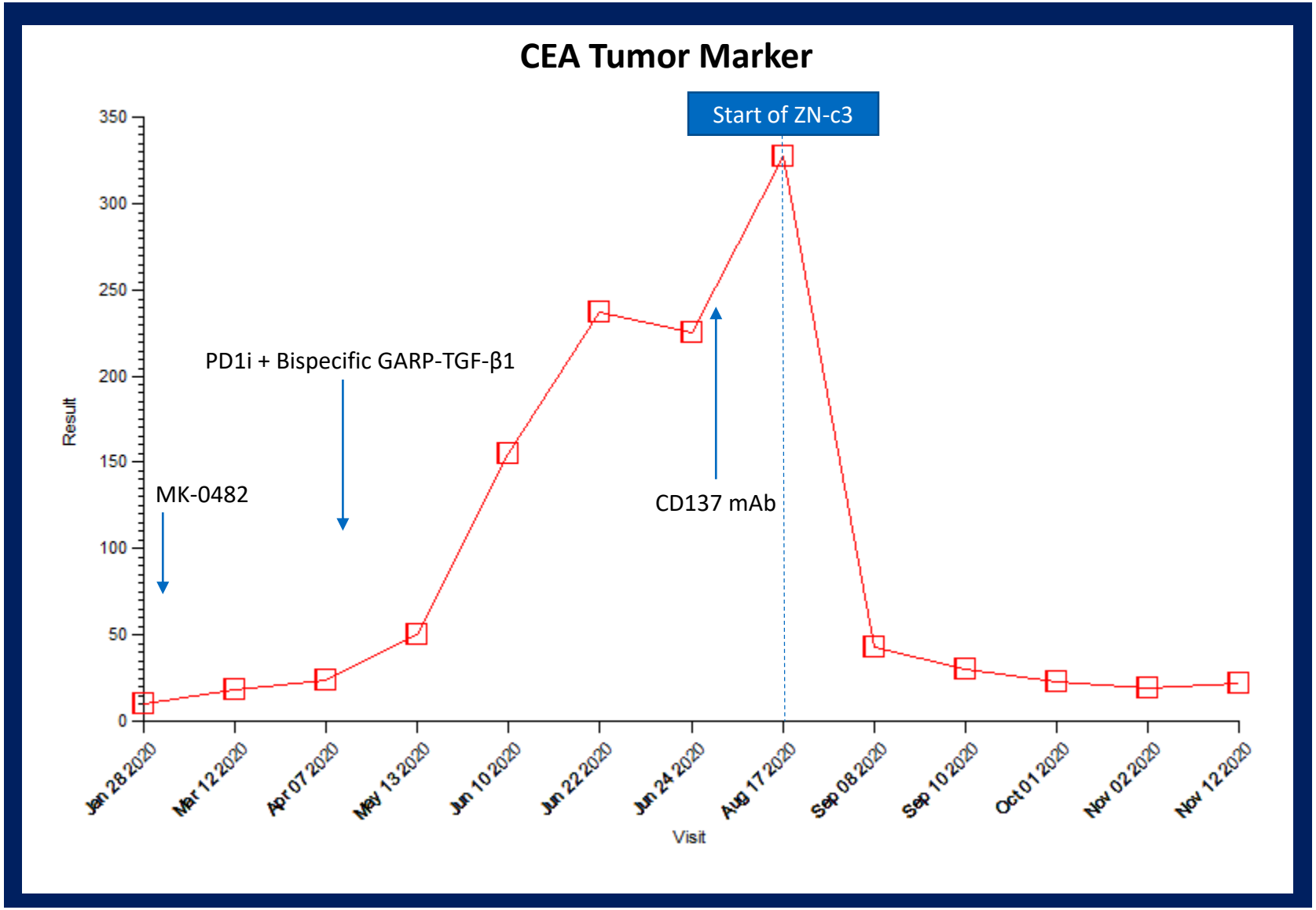
Exceptional Responder #1: Unexpected, Dramatic and Durable Decrease of Tumor Marker within Weeks of First ZN-c3 Administration



- CEA tumor marker typically used in CRC
- Patient experienced rapid CEA decrease from 327 ng/mL at baseline to <50 ng/mL within 3 weeks of initiation of ZN-c3
- Tumor marker level remained down for ~6mos

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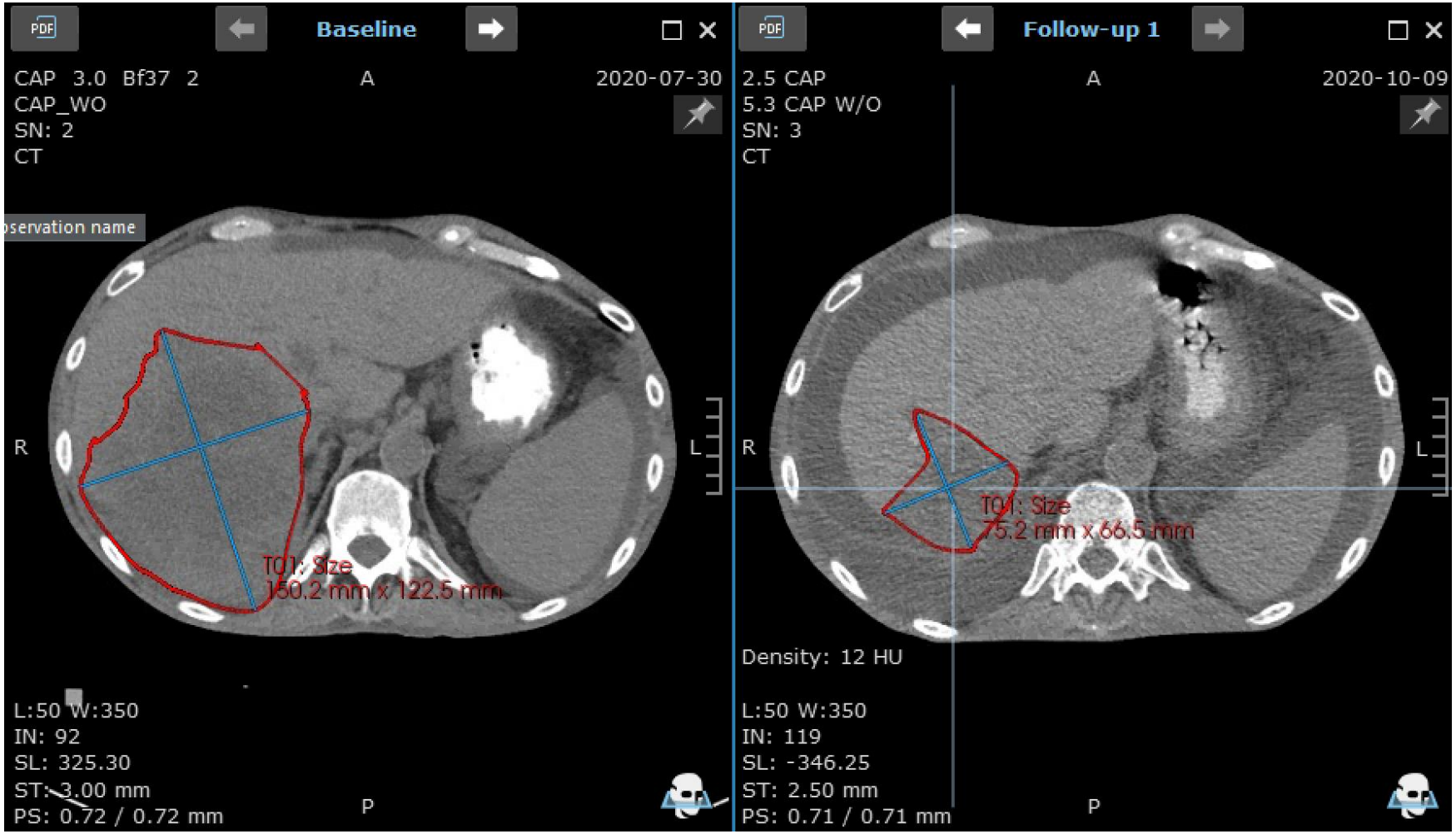
Exceptional Responder #1: Baseline and Follow-up Liver Imaging and Tumor Markers with 51% Partial Response (Updated 03/01/21)



Baseline: 07/30/2020

1st Assessment: 10/09/2020

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Exceptional Responder #2: Experienced 18 prior lines and first response seen in over two years with ZN-c3

Exceptional Responder #2 Summary

- 72-year-old White female, Stage IV ovarian cancer, metastases to the pleura, peritoneum and retroperitoneum. ECOG PS 1
- Heavily pretreated with 18 prior lines of therapy, 11 of which were in the advanced/metastatic setting (see table)
- ZN-c3 starting dose: 175 mg BID on October 7th, 2020
  - Dose was reduced to 300 mg QD on D13 due to Gr 3 diarrhea and Gr 2 dehydration, further modified to 200 mg QD (5/2) on D69 due to persistent Gr 1-2 dizziness Tolerating 5 days on 2 days off weekly
- CA-125 dropped from 610 kU/L at baseline to 125 kU/L within 4 weeks after first dose and normalized 3 weeks later
- TP53 mutant. BRCA1/2 negative. CCNE1 amp positive
- Duration on study. 186 days (6.2 months) and remains on study

Confirmed PR with 65% reduction overall (updated 03/01/21) with 18 prior lines and first response seen in over two years; Remains on study

Intent of Treatment	Regimen	Start	Stop	Best Response
Adjuvant	Carboplatin / Paclitaxel	8/Sep/2011	10/Nov/2011	Unknown
Adjuvant	Letrozole	27/Apr/2012	25/Oct/2013	PD
Adjuvant	Carboplatin / Paclitaxel	7/Nov/2013	20/Feb/2014	SD
Adjuvant	Carboplatin / Taxol	17/Apr/2014	29/May/2014	Unknown
Adjuvant	Zejula	UNK/UNK/2014	20/Jul/2014	Unknown
Adjuvant	Arimidex	20/Mar/2015	5/Jun/2015	Unknown
Total 18 Prior Lines				
Advanced / Metastatic	APG115 (MDM2 inh) / Pembrolizumab	27/Feb/2019	05/Aug/2019	SD
Advanced / Metastatic	ABBV-155 (CD275 ADC)	09/Sep/2019	09/Sep/2019	PD
Advanced / Metastatic	NC318 (Siglec-15 AB)	16/Oct/2019	23/Dec/2019	SD
Advanced / Metastatic	SM08502 (CLK inhibitor)	13/Feb/2020	9/Apr/2020	PD

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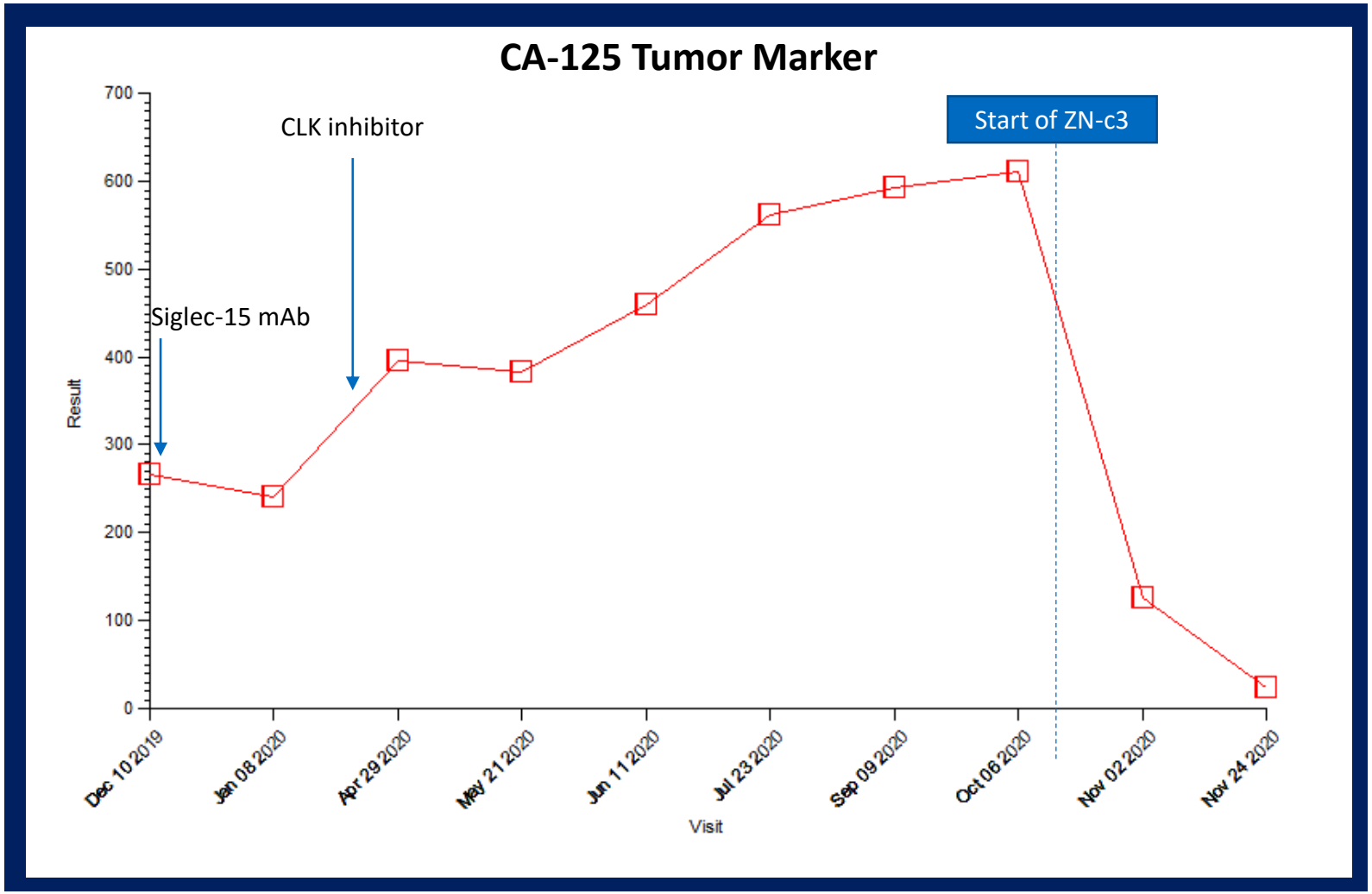
Exceptional Responder #2: Unexpected, Dramatic and Durable Decrease of Tumor Marker within Weeks of First ZN-c3 Administration



- CA-125 tumor marker typically used in ovarian cancer
- CA-125 dropped from 610 kU/L at baseline to 125 kU/L within 4 weeks after first dose and normalized 3 weeks later
- Patient remains on study and tumor marker remains down

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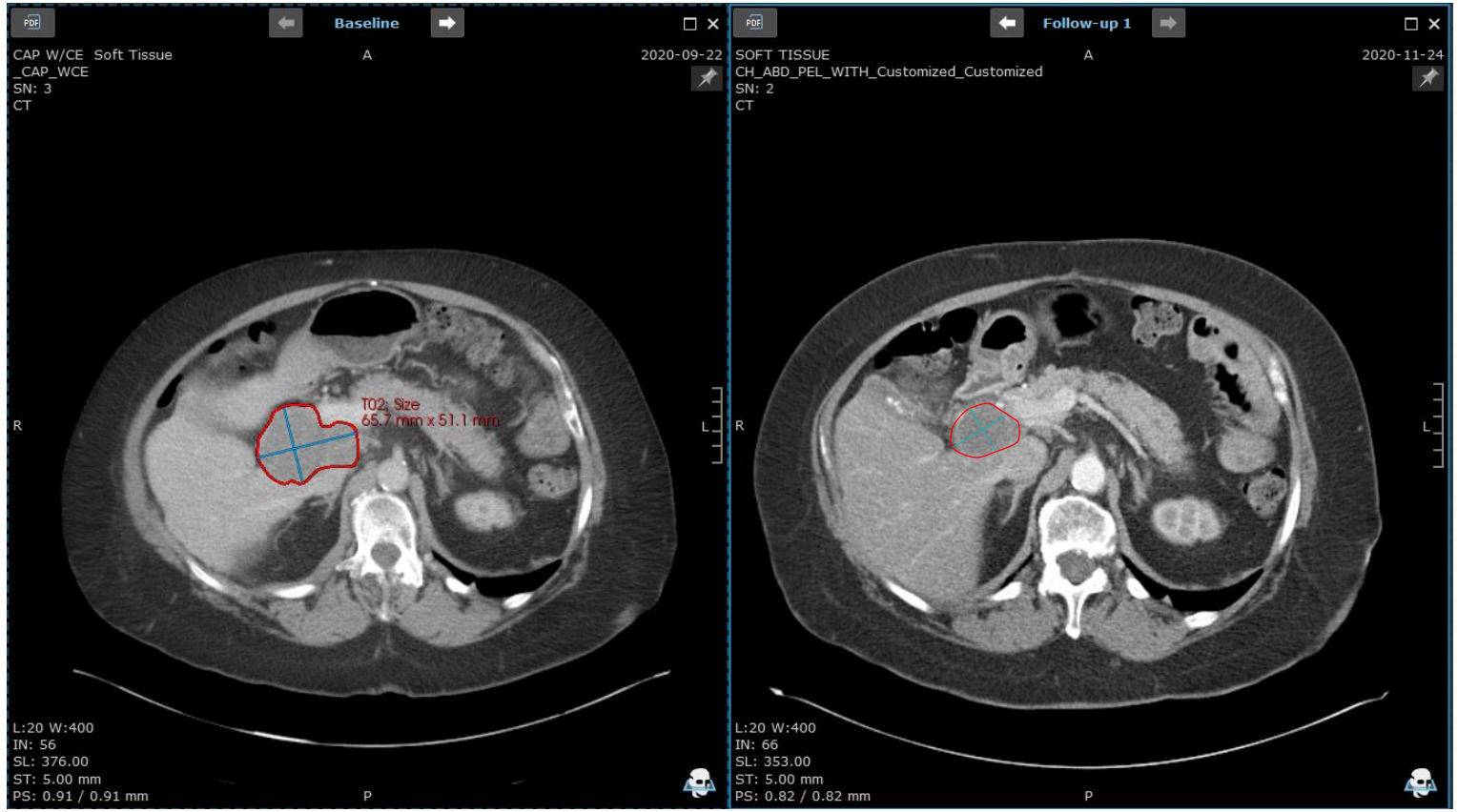
Exceptional Responder #2: Baseline and Follow-up Porta Hepatis Lymph Node; Overall 65% Partial Response (Updated 03/01/21)



Baseline: 09/22/2020 1st Assessment: 11/24/2020

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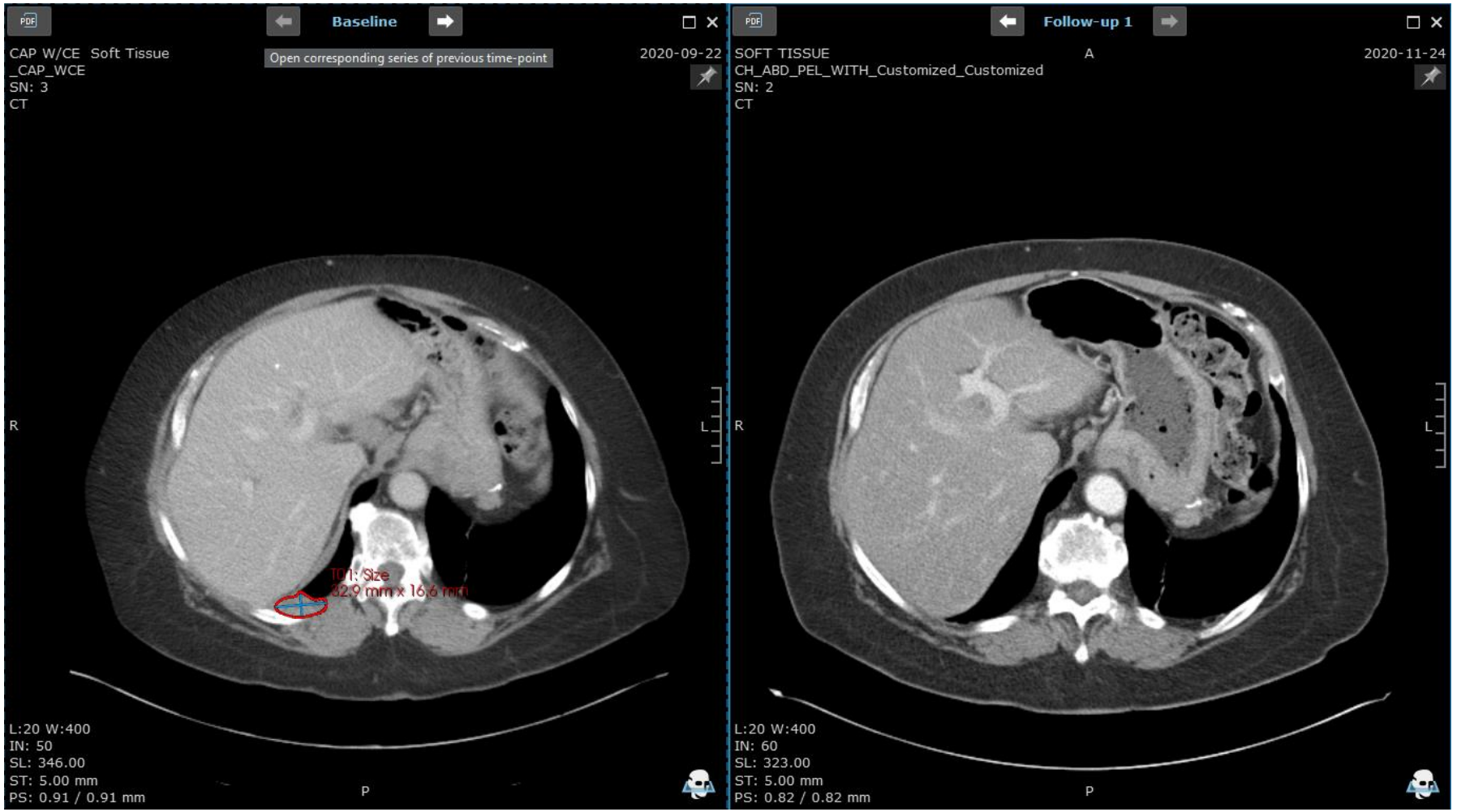
Exceptional Responder #2: Baseline and Follow-up Pleural Lesion with Complete Regression



Baseline: 09/22/2020

1st Assessment: 11/24/2020

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Exceptional Responder #3: No responses seen prior to ZN-c3

Exceptional Responder #3 - Summary

- 61-year-old White male, Stage IV NSCLC, metastases to lung, liver, ECOG PS 0
- 3 prior lines of therapy in the advanced/metastatic setting
- ZN-c3 starting dose: 350 mg QD on November 17th, 2020, no dose reduction
- TP53 mutant. BRCA1/2 negative. CCNE1 amp negative
- Duration on study: 145 days (4.8 months) and remains on study

Confirmed PR with 50% reduction overall at first evaluation; Remains on study

Previous Therapy Experience

Intent of Treatment	Regimen	Start	Stop	Best Response
Neoadjuvant	Carboplatin/ Paclitaxel	27/Nov/2018	05/Feb/2019	SD
Adjuvant	Durvalumab	UNK/Feb/2019	UNK/Jul/2019	PD
Advanced / Metastatic	Carboplatin/ Pemetrexed	UNK/Jul/2019	23/Oct/2019	PD
Advanced / Metastatic	Atezolizumab	UNK/Jan/2020	UNK/Mar/2020	PD
Advanced / Metastatic	Docetaxel	UNK/Apr/2020	20/Sep/2020	PD

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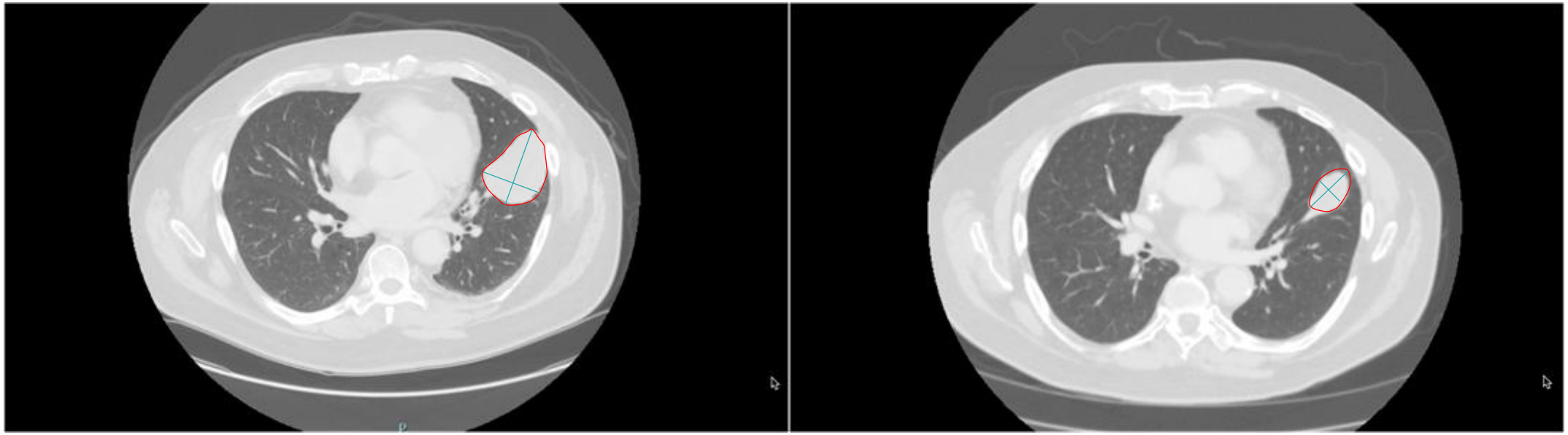
Exceptional Responder #3: Baseline and Follow-up Lung Mass Imaging with 50% Partial Response



Baseline: 11/10/2020

1st Assessment: 01/18/2021

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USC Partial Response #1

USC Partial Response #1 - Summary

- 72-year-old, White female, Stage IV USC; metastases to peritoneum and lymph nodes, ECOG PS 1
- 1 prior line of therapy in the advanced/metastatic setting
- Starting dose: 350 mg QD on December 9th, 2020
  - Dose reduced to 300 mg QD on D55 due to Gr 3 fatigue
- Tumor marker CA 125:
  - December 8th, 2020: 35.8 U/mL
  - February 10th, 2021: 16 U/mL
- TP53 mutant. BRCA1/2 negative. CCNE1 amp negative

Unconfirmed PR of 49%; Remains on Study

Previous Therapy Experience

Intent of Treatment	Regimen	Start	Stop	Best Response
Adjuvant	Carboplatin / Paclitaxel	10/Dec/2018	27/Mar/2019	Unknown
Advanced / Metastatic	Paclitaxel / Avastin	06/Dec/2019	27/Mar/2020	Unknown
Maintenance	Avastin	24/Apr/2020	30/Oct/2020	Unknown

USC Partial Response #2

USC Partial Response #2 - Summary

- 69-year-old, African American female, Stage IV USC, metastases to lymph node and lung, ECOG PS 1
- 4 prior lines of therapy in the advanced/metastatic setting
- Starting dose: 300 mg QD on January 13th, 2021
  - Dose modified to 300 mg QD (5/2) on D44 due to Gr 2 nausea
  - Further reduced to 200 mg QD on D51 due to Gr 2 fatigue, nausea and anorexia
- Tumor marker CA-125:
  - Baseline: 440.4 U/mL
  - D63: 46.4 U/mL
- TP53 mutant. BRCA1/2 negative. CCNE1 amp negative

Unconfirmed PR of 43%, Remains on Study

Previous Therapy Experience

Intent of Treatment	Regimen	Start	Stop	Best Response
Advanced / Metastatic	Carboplatin / Taxol / Avastin	13/Sep/2019	22/Nov/2019	PD
Advanced / Metastatic	Trastuzumab (Herceptin)	24/Feb/2020	07/Apr/2020	PD
Advanced / Metastatic	Pembrolizumab / Lenvatinib	30/Apr/2020	21/May/2020	PD
Advanced / Metastatic	Doxorubicin Liposomal	24/Jun/2020	12/Nov/2020	PD

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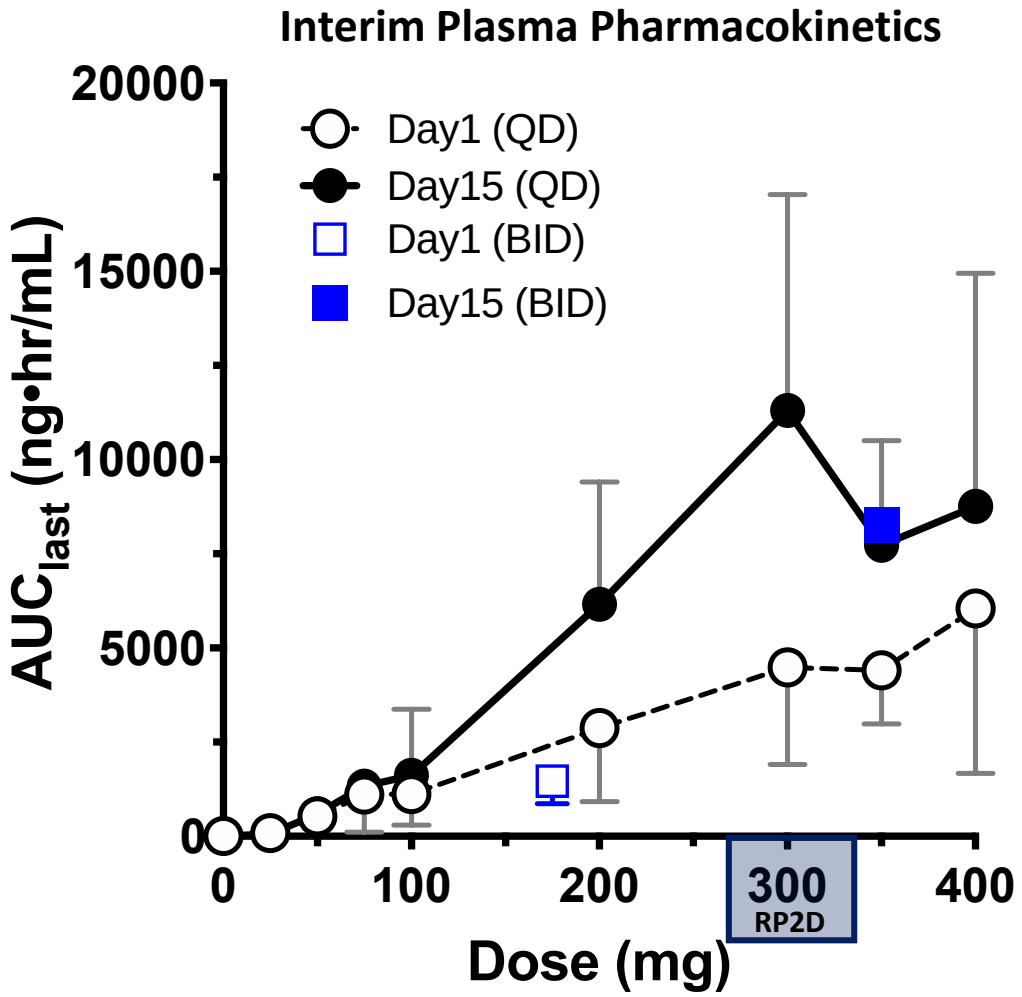
RP2D Shows Highest AUC Between 25 mg and 400 mg Doses



- Greater than dose proportional exposure up to 450 mg (not plotted)
- 1.87 to 2.50-fold accumulation at 200-350 mg dose
- No additional increase of exposure occurs beyond Day 15 (up to Cycle 6)
- ZN-c3 shows ~30% more exposure than AZD1775 300 mg dose[1]

(1) Cancer Chemotherapy and Pharmacology (2020) 86:97–108

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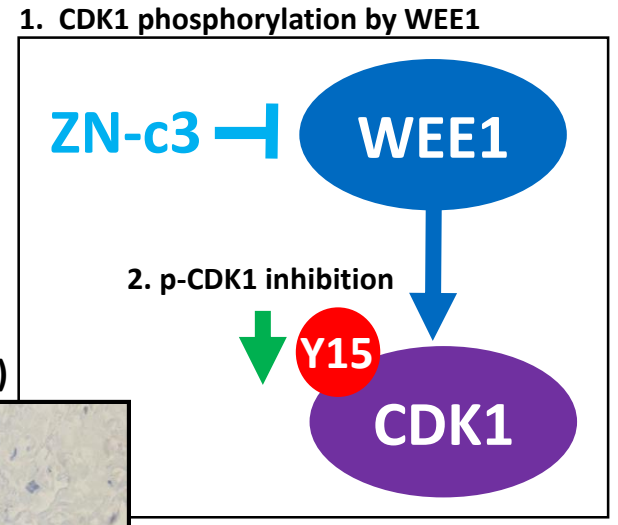
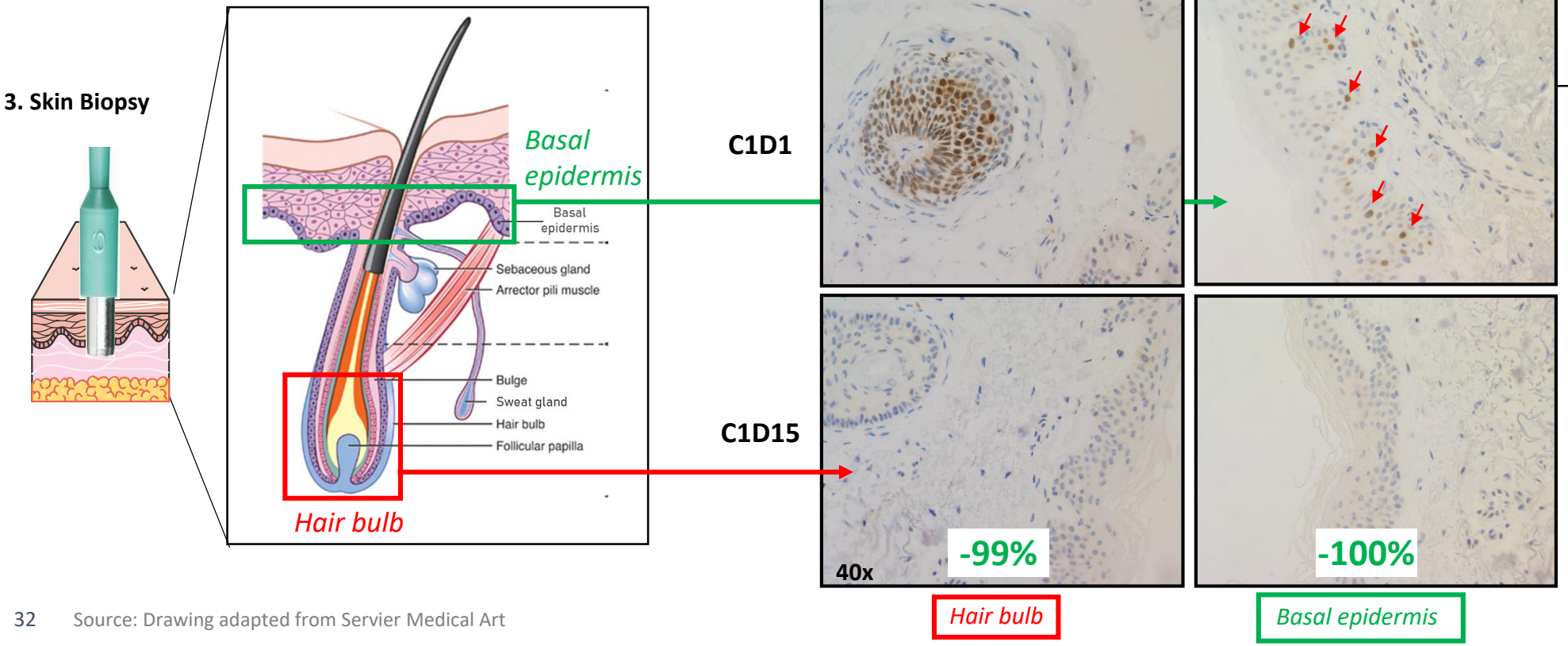
Decreases in p-CDK1 Show Target Engagement for WEE1 Inhibition

Confirmation of WEE1i Target Engagement in Surrogate Tissue

1. CDK1 phosphorylation (p-CDK1) is mediated by WEE1
2. Inhibition of WEE1 therefore will lead to inhibition of p-CDK1
3. Skin biopsies were performed at baseline (C1D1) and on-treatment (C1D15) to verify p-CDK1 levels, and hence level of target engagement of WEE1





Source: Drawing adapted from Servier Medical Art

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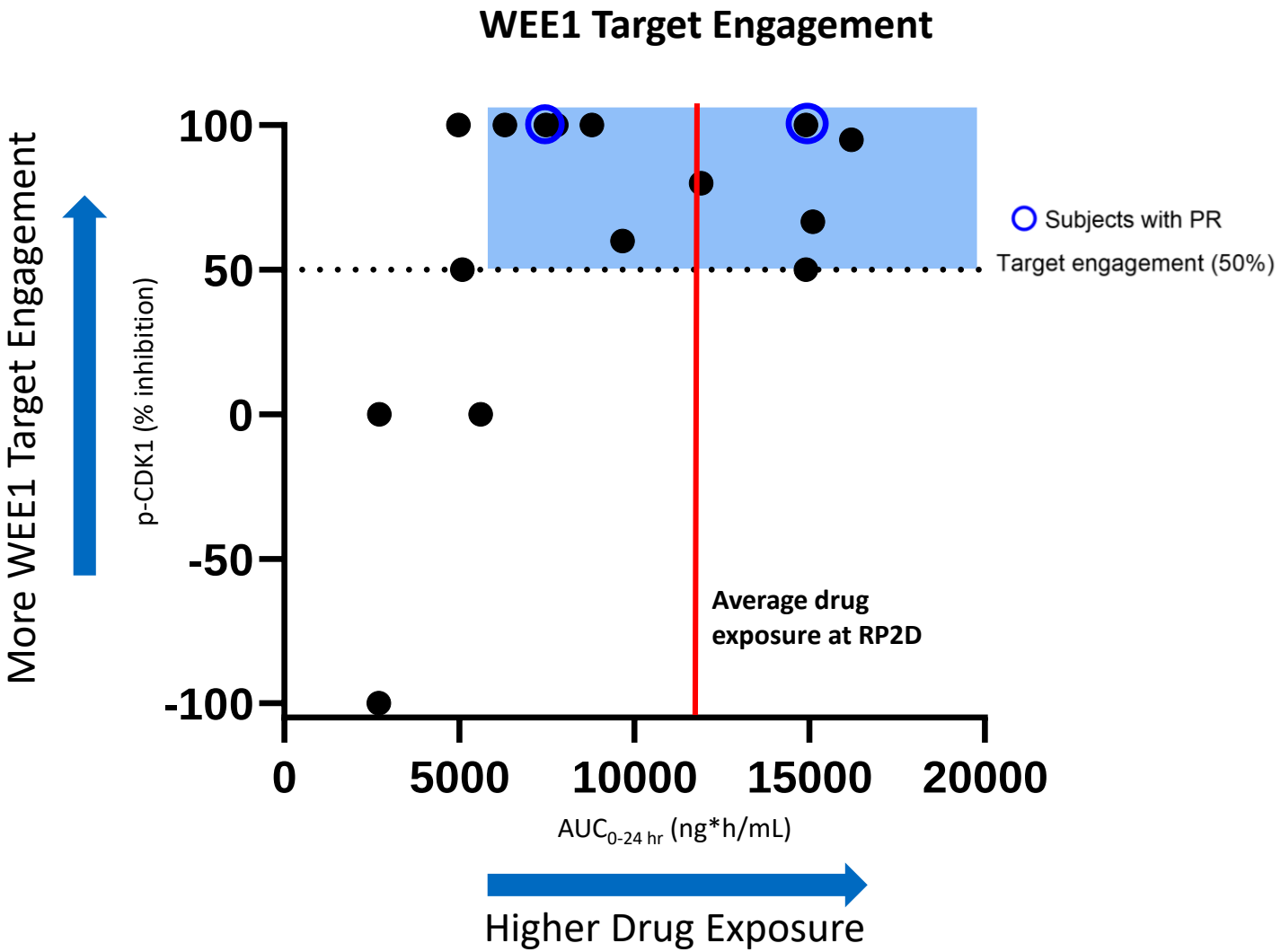
PK/PD Correlation Shows Active Target Engagement at RP2D



- Inhibition of p-CDK1 demonstrates WEE1 target engagement
- Increase in dose / drug exposure directly relates to WEE1 target engagement
- Data supportive of RP2D

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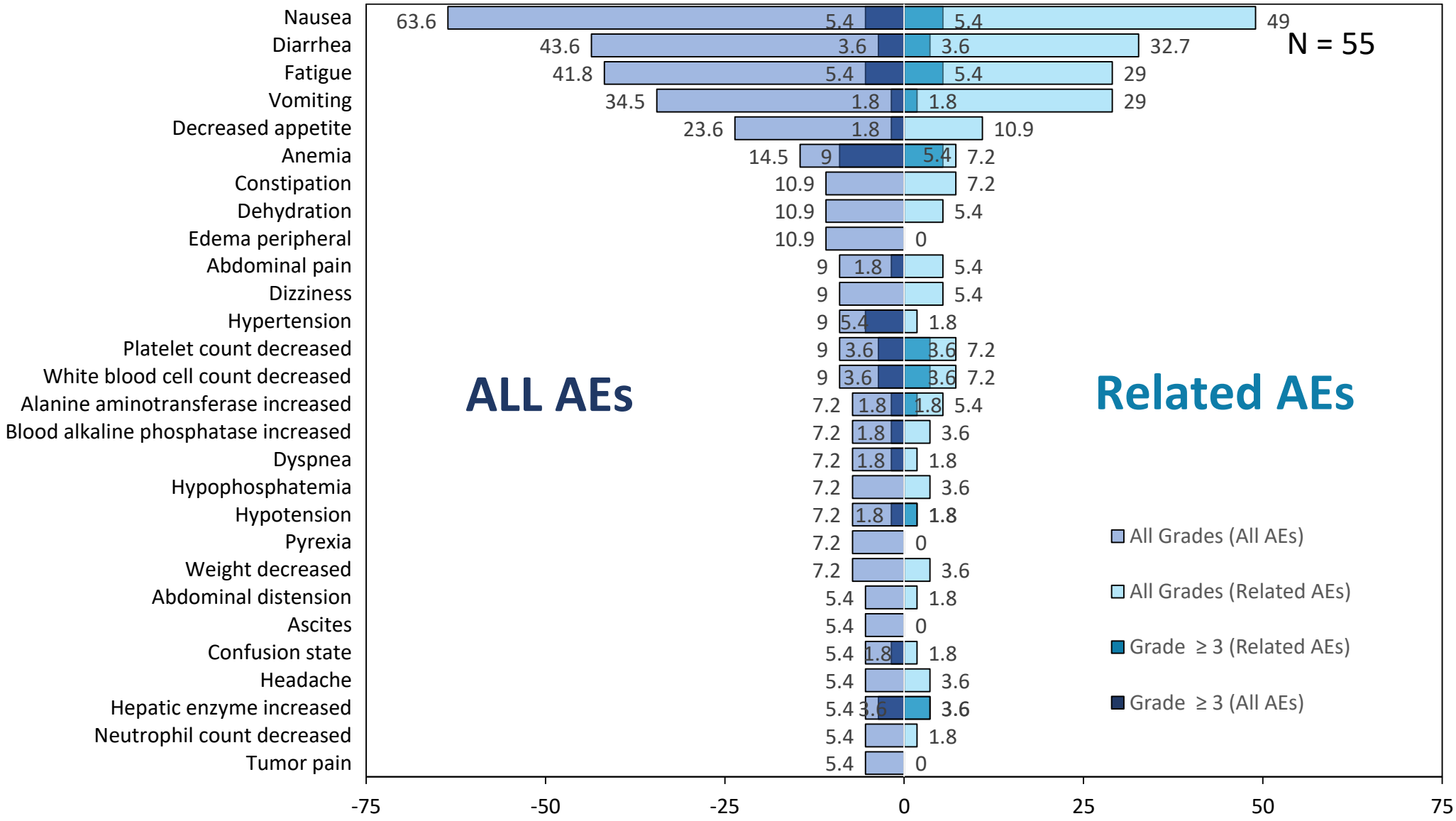
Interim Adverse Events (≥3 events) of All Patients (as of 02/12/2021)



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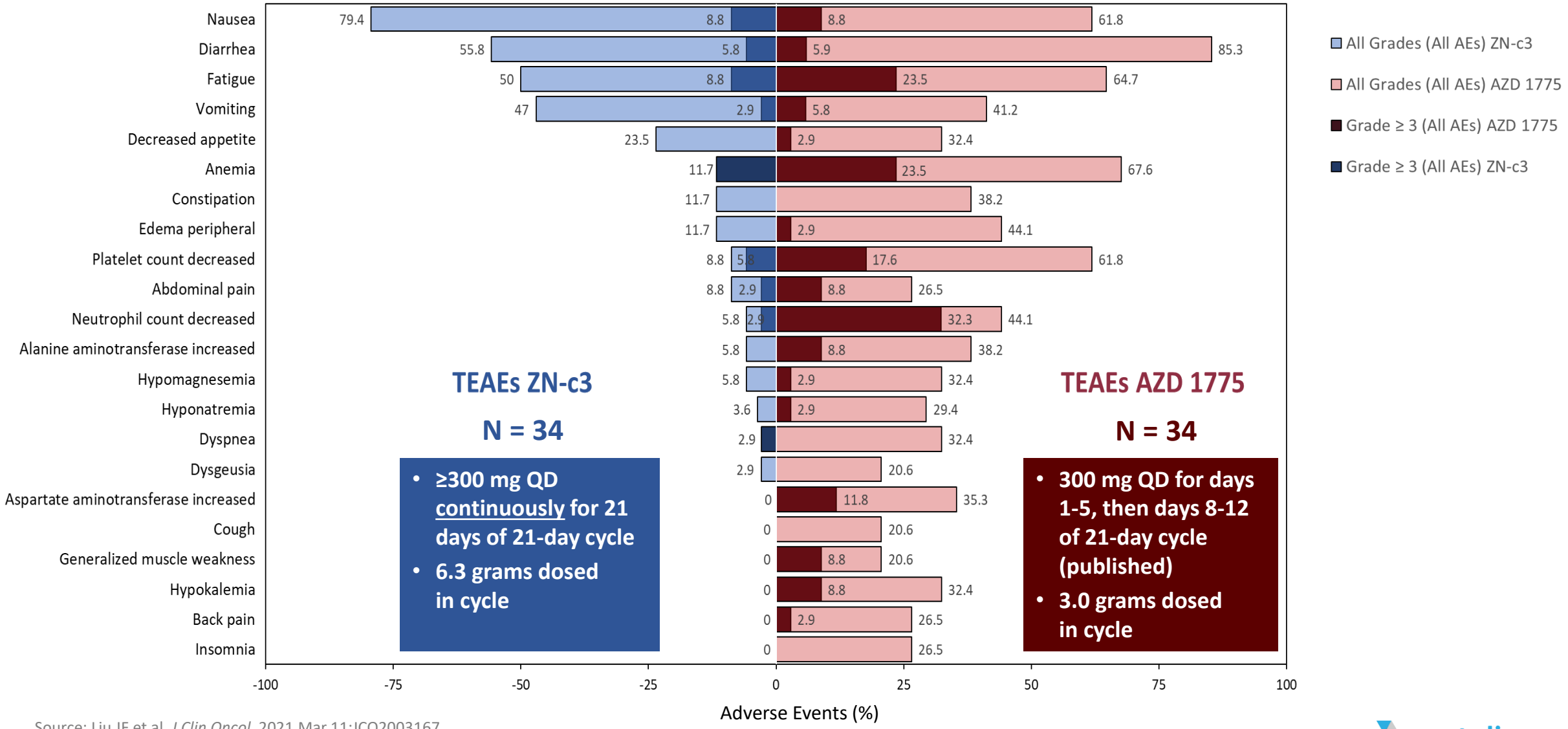
Interim AEs (all events): ZN-c3 ≥300 mg versus Adavosertib 300 mg[1]



Source: Liu JF et al. *J Clin Oncol.* 2021 Mar 11:JCO2003167

(1) Non-head-to-head comparison. Results of a head-to-head comparison may differ significantly from those set forth herein. In addition, because our Phase 1 clinical trial for ZN-c3 and the Adavosertib clinical trials were separate trials, differences between the results of the trials may not be statistically or clinically meaningful

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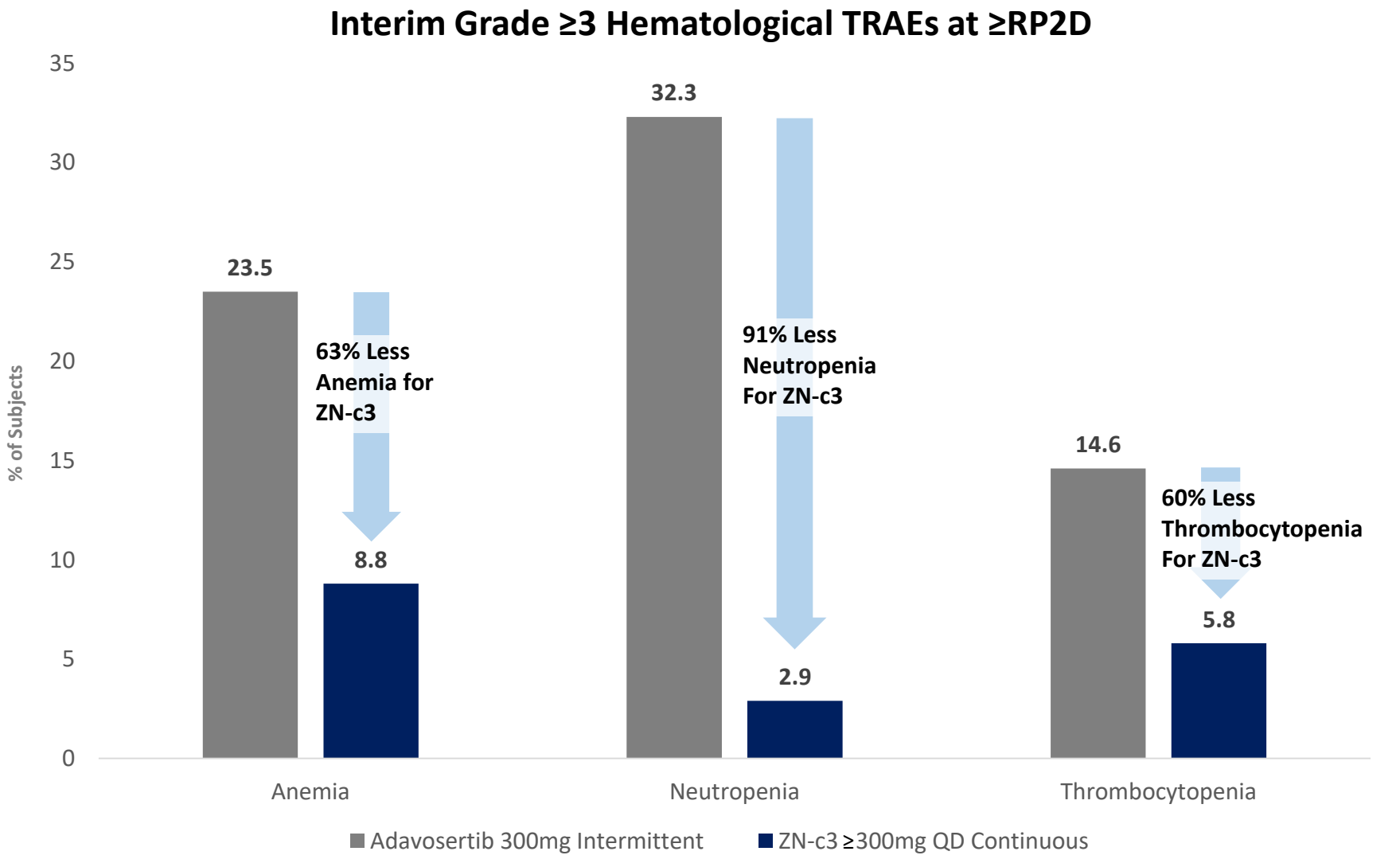
ZN-c3 Exhibits Meaningfully Reduced Hematological Toxicities versus Adavosertib(1)



Despite continuous dosing delivering twice the drug load, ZN-c3 induces markedly less hematological toxicity

Source: Liu JF et al. J Clin Oncol. 2021 Mar 11:JCO2003167

(1) Non-head-to-head comparison. Results of a head-to-head comparison may differ significantly from those set forth herein. In addition, because our Phase 1 clinical trial for ZN-c3 and the Adavosertib clinical trials were separate trials, differences between the results of the trials may not be statistically or clinically meaningful

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Other ZN-c3 Studies

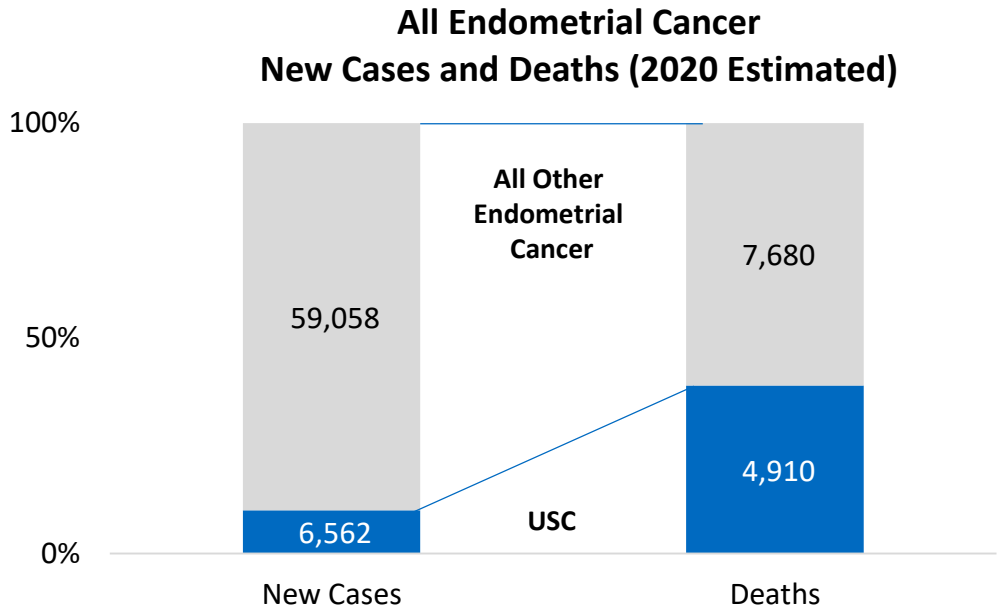
ZN-c3 Phase 2 Monotherapy Study in USC

Overview of Uterine Serous Carcinoma (USC)

- Type II endometrial cancer
- Not hormonally mediated
- Approx. 70% of USC present with Stage III or IV disease at diagnosis
- Poor survival rates; only 30-50 %, even if confined to uterus
- >90% of USCs have TP53 mutation
- Recurrence rates are 29-80% post-surgery
- ~6k new cases and ~4.5k deaths in U.S. per year
- Current standard of care: comprehensive surgery, adjuvant chemotherapy and adjuvant vaginal cuff brachytherapy

USC Represents High Unmet Medical Need

Comprises 10% of Endometrial Cancers with Highest Mortality



Zentalis Initiating Phase 2 Monotherapy Trial for Patients with USC in 3Q 2021

Source: Gynecologic Oncology 115 (2009) 142-153, David Boruta et al.; National Cancer Institute, SEER 2020 Data

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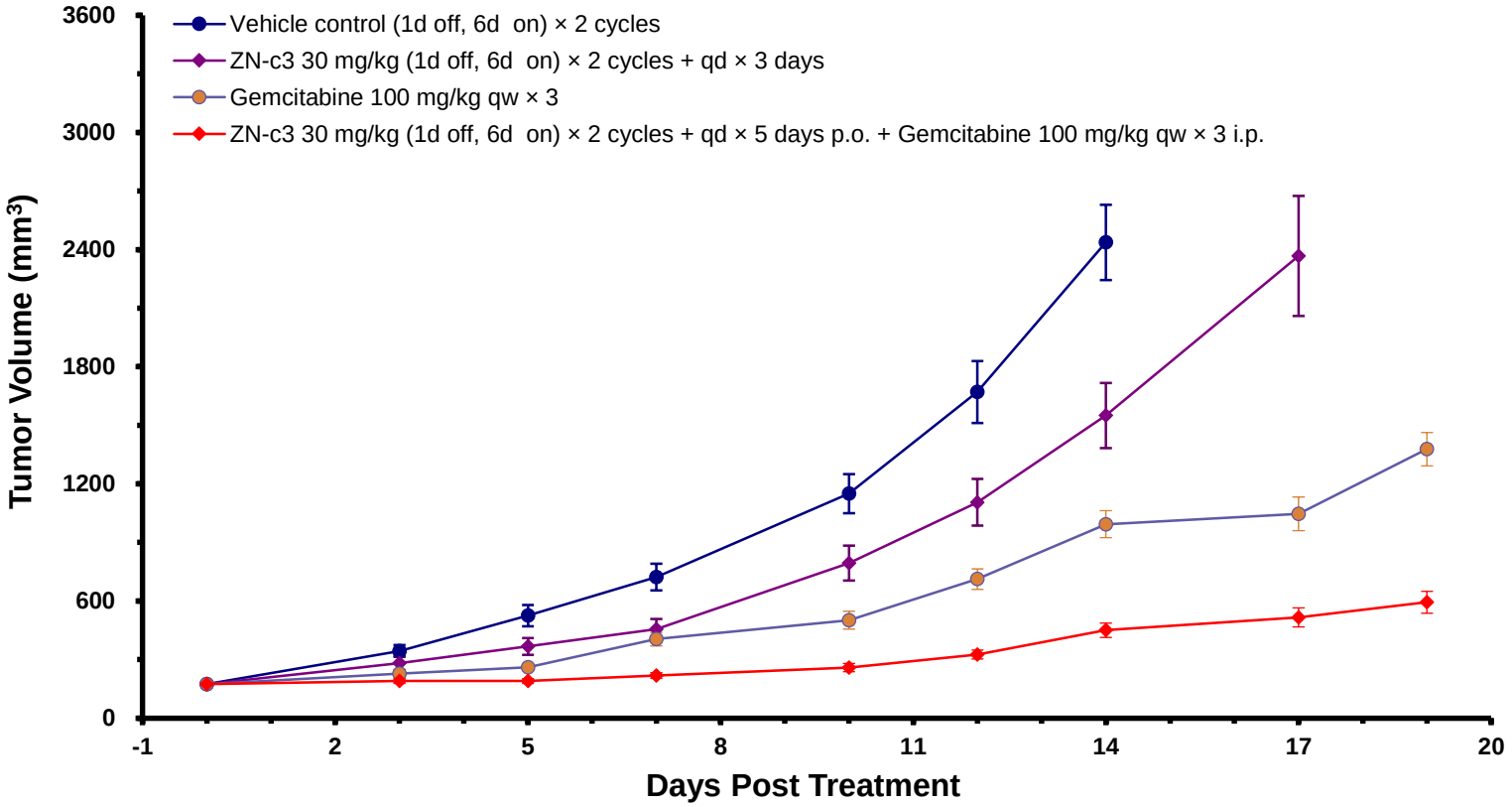
ZN-c3 + Gemcitabine: Novel Combination Approach for Osteosarcoma

ZN-c3 + Gemcitabine SJSA-1 Sarcoma Tumor Model



Clinical Unmet Need in Osteosarcoma

- Approximately 1,000 new cases in the US[(1)]
- Up to 90% have sequence mutations or structural variants in TP53 and are often enriched in relapsed or refractory cases, portending resistance to chemotherapy[(2)]
- No significant advances over the last 10 plus years[(3)]
- Overall survival rate for patients with metastatic or recurrent disease is <20%[(4)]

Anticipated Phase 1/2 Start in 3Q 2021

(1) American Cancer Society. Last accessed on April 7th, 2020
(2) Tang et al. J *Orthop Res.* 2019;37(3):789–98.
(3) Misaghi A et al. *Sicot-j*. 2018;4:12.
(4) Harrison DJ et al. *Expert Rev Anticanc.* 2018;18:1, 39-50

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ZN-c3 + Zejula (niraparib) Collaboration with GSK

Zentalis Pharmaceuticals Enters into Clinical Collaboration and Supply Agreement with GlaxoSmithKline to Evaluate its Oral WEE1 Inhibitor, ZN-c3, in Combination with Niraparib, a PARP Inhibitor

ZN-c3 is currently being evaluated in patients with advanced solid tumors and ovarian cancer

NEW YORK & SAN DIEGO, April 12, 2021 -- Zentalis Pharmaceuticals, Inc. (Nasdaq: ZNTL), a clinical-stage biopharmaceutical company focused on discovering and developing small molecule therapeutics targeting fundamental biological pathways of cancers, today announced a clinical collaboration agreement with GlaxoSmithKline ("GSK") in which Zentalis will evaluate the combination of ZN-c3, Zentalis' oral WEE1 inhibitor product candidate, and ZEJULA (niraparib), GSK's poly (ADP-ribose) polymerase (PARP) inhibitor, in patients with advanced epithelial ovarian cancer. Zentalis is currently conducting clinical studies with ZN-c3 both as a monotherapy and in combination with certain standard of care therapies.

"This clinical collaboration and supply agreement with GSK allows us to investigate the broader potential of our WEE1 inhibitor when used as part of a combination treatment with niraparib, a PARP inhibitor," commented Dr. Anthony Sun, Chairman and Chief Executive Officer of Zentalis Pharmaceuticals. "As demonstrated in our preclinical studies, ZN-c3 is designed to have significant advantages over other investigational WEE1 inhibitor therapies. We believe this combination has the potential to meaningfully improve the outcomes for patients with ovarian cancer."

PARP inhibitors prevent DNA damage repair in cancer cells. Similar to PARP, WEE1 plays a role in cellular regulation and repair, allowing cells with DNA damage to repair and survive. Inhibition of WEE1 causes dysregulation of DNA replication and subsequently induces apoptosis. Based on these complementary mechanisms of action, the use of WEE1 and PARP inhibitors could potentially have synergistic anti-tumor activity.

More than 300,000 women worldwide are diagnosed with ovarian cancer each year, leading to over 180,000 fatalities[1]. While substantial progress has been made in the treatment of this disease, there is an urgency to address the remaining unmet need through the development of innovative combination treatments.

Under the terms of the non-exclusive collaboration, Zentalis is responsible for conducting the study with GSK providing all required doses of niraparib. Zentalis maintains full ownership of ZN-c3.

[1]www.cancerresearch.org

Zentalis and GSK Collaboration Agreement

- Announced April 12, 2021
- Zentalis will evaluate the combination of WEE1 inhibition (ZN-c3) and PARP inhibition (niraparib) in patients with advanced epithelial ovarian cancer
- ZN-c3's tolerability profile shows promise for future combinations with niraparib and other drugs
- Zentalis/Zentera retain full ownership of ZN-c3
- Details of the study will be disclosed on www.clinicaltrials.gov

Initiating Phase 1b in 2H 2021

ZN-c3 Market Opportunities

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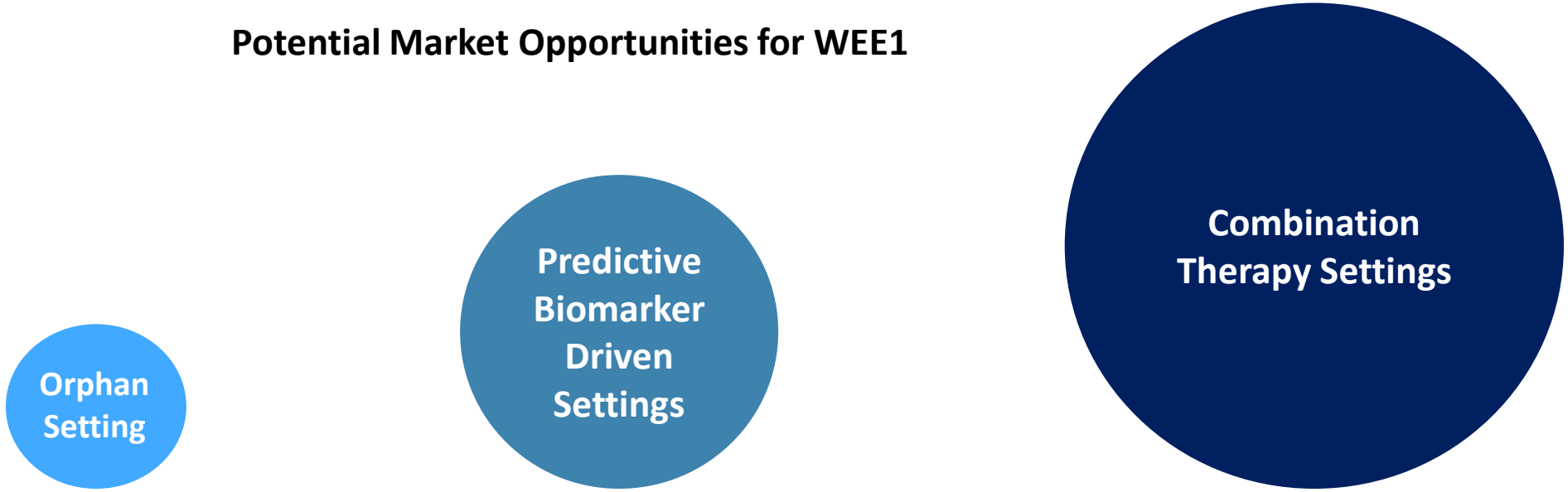
Versatility of WEE1 Inhibition Could Unlock Large Addressable Populations Across Solid Tumors

Potential Market Opportunities for WEE1



Drug Setting	Single Agent	Single Agent	Combination
Representative Indication(s)	Uterine Serous Carcinoma	Biomarker Identified "Exceptional Responders" Across Tumor Types	PARP Related (Early, Adjuvant, Late Lines) Chemo Related (Ovarian, NSCLC, CRC, Osteosarcoma) Novel Related (Undisclosed)
Response Expectations	~30%	50% plus	Indication Specific
Population Incidence(s)	~6,500 (US Only)(1)	10,000 – 30,000 (US only)	Large

(1) Gynecologic Oncology 115 (2009) 142-153, David Boruta et al.; National Cancer Institute, SEER 2020 Data

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ZN-c3 Summary

- ZN-c3 has strong evidence for clinical activity: Exceptional Responders in heavily pretreated populations, as well as PRs in USC patients
- ZN-c3 appeared safe and well-tolerated with a wide therapeutic window
- Zentalis declared RP2D with continuous (not intermittent) dosing at 300 mg QD
- Zentalis confirming Unique Predictive Biomarker for the Exceptional Responder patient population
- ZN-c3 may offer treatment to diverse solid tumor indications:

AS SINGLE AGENT

- Uterine Serous Carcinoma
- Exceptional Responder Population

IN COMBINATIONS

- PARP Related
- Chemo Related
- Novel Related

ZN-c3 has the Potential to be Best-in-Class WEE-1 Inhibitor in the Clinic

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Questions?

Key Milestones

Event	Expected Timing
ZN-c5 (Oral SERD)	
✓ Phase 1 topline results from monotherapy dose escalation study	■ Achieved July '20
✓ Initiate Phase 1b combination study with abemaciclib	■ Achieved 4Q '20
■ Phase 1 topline results from Window of Opportunity study	■ 1H 2021
■ Initiate Phase 2 monotherapy study	■ 1H 2021
■ Initiate Phase 2 combination study with palbociclib	■ 1H 2021
■ Initiate Phase 1b combination study with ZN-d5	■ 2021
■ Initiate Phase 2/3 monotherapy in earlier-stage patients	■ 2021 (1)
ZN-c3 (WEE1 Inhibitor)	
✓ Initiate Phase 1b combination dose escalation study with chemotherapy in ovarian cancer	■ Achieved 4Q '20
✓ Phase 1 initial results from dose escalation study in advanced solid tumors	■ AACR 2021
■ Initiate Phase 2 monotherapy in uterine serous carcinoma	■ 3Q 2021
■ Initiate Phase 1/2 chemotherapy combo in osteosarcoma	■ 3Q 2021
■ Initiate Phase 1/2 niraparib combo in ovarian cancer	■ 2H 2021

Event	Expected Timing
ZN-d5 (BCL-2 Inhibitor)	
✓ IND Clearance	■ April '20
✓ Initiate Phase 1 trial in AML and Non-Hodgkin's Lymphoma	■ Achieved 4Q '20
ZN-e4 (EGFR Inhibitor)	
■ Initial results from dose escalation study	■ 2021
■ Evaluate potential for use in combinations for treatment of lung cancer	■ 2021+
Integrated Discovery Engine	
■ Submit 5th IND	■ 2021
Zentera	
✓ Submit ZN-c5 and ZN-c3 INDs in China	■ Achieved 1Q '21
■ Submit ZN-d5 INDs in China	■ 2021

✓ ***Achievements***

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