



OPTIMIZING MANAGEMENT OF ADVANCED PROSTATE CANCER: MULTIDISCIPLINARY APPROACHES

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Disclosures

• Consultant for AbbVie, Advanced Accelerator Applications, Bayer, Exelixis, and Janssen.



Prostate cancer: current and future/optimal management

- mHSPC
 - Up-front intensification is appropriate for almost all
 - Choosing between chemo, ARTA, radiation to primary, or multiple
 - What does PEACE-1 add?
- Oligometastatic prostate cancer
 - Considerations for metastasis-directed therapy
- mCRPC
 - Implications of new mHSPC landscape on sequencing
 - New targets: Pi3K/AKT, PARP, ¹⁷⁷Lu-PSMA
- Advanced immunotherapy



Early chemotherapy improved survival in metastatic hormone sensitive prostate cancer (HSPC)



STAMPEDE (James et al, Lancet 2016; 387:1163-77)

CHAARTED (Sweeney CJ et al. NEJM 2015; 373:737-46)



C Patients with Low-Volume Disease





Early abiraterone improves survival in mHSPC



STAMPEDE:

Hi risk localized if 2/3: Gleason 8-10 T3/T4 PSA >40

Biochemically recurrent if PSA >4 and PSA DT <6 mo

James ND et al. NEJM 2017; DOI: 10.1056/NEJMoa1702900 LATITUDE 2 of 3 high risk features:

- Gleason 8-10
- 2+ bone metastases
- Visceral metastases

Fizazi K et al. NEJM 2017 DOI:10.1056/NEJMoa1704174

A Overall Survival	C	ombination	Hazard Ratio with Combination Therapy	P Value fo
Subgroup	ADT Alone	Therapy	(95% CI)	Interaction
8	no. of deaths/	no, of patients		
Metastatic status	,	51		0.37
Nonmetastatic	44/455	34/460	0.75 (0.48–1.18)	
Metastatic	218/502	150/500	0.61 (0.49–0.75)	
Nodal status				0.80
Negative	83/438	61/434	0.69 (0.49–0.96)	
Positive	164/483	113/484	0.61 (0.48–0.77)	
Indeterminate	15/36	10/42	0.68 (0.29–1.57)	
Gleason score	,	,		0.57
≤7	40/223	33/221	0.76 (0.48–1.23)	
8-10	216/721	144/715	0.59 (0.48-0.73)	
Unknown	6/13	7/24	◆ ● 0.47 (0.11-1.91)	
Age at randomization	,	,		0.003
<70 yr	180/596	110/603	0.51 (0.40-0.65)	
≥70 yr	82/361	74/357	• 0.94 (0.69–1.29)	
WHO performance status				0.11
0	182/744	137/745	0.69 (0.56–0.87)	
1 or 2	80/213	47/215	0.50 (0.35–0.72)	
NSAID or aspirin use	1	'		0.35
No	191/718	132/714	0.59 (0.47-0.74)	
Yes	71/239	52/246	0.71 (0.50–1.02)	
Radiotherapy planned	1	'		0.89
No	226/561	160/564	0.63 (0.51–0.77)	
Yes	36/396	24/396	0.64 (0.38–1.08)	
Recurrent disease		,		0.19
No	254/919	171/900	0.61 (0.50–0.74)	
Yes	8/38	13/60	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●	
Time period	1	'		0.62
ABCEG	122/328	95/330	0.69 (0.53-0.90)	
ABCEGH	17/49	10/47	0.60 (0.27–1.33)	
AGH	123/580	79/583	0.59 (0.44–0.78)	
Overall			0.63 (0.52–0.76)	
			0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.2 1.4	



Combination Therapy Better ADT Alone Better

AR antagonists in mHSPC: ENZAMET, ARCHES and TITAN

- Up-front enzalutamide increased 3 year OS from 72% to 79% in ENZAMET¹, HR 0.67.
 - Bicalutamide allowed in control arm
 - No apparent advantage for enza after docetaxel; toxicity was noted
- TITAN² found improved^{*}OS at 24 months for apalutamide in mHSPC (82.4% vs 73.5%) compared to placebo

1. Davis ID et al. NEJM 2019; 381:121-31

2. Chi KN et al. NEJM 2019; 381:13-24







Next step: individualization of treatment selection?

- No difference between abiraterone and docetaxel for mHSPC during overlapping accrual on STAMPEDE¹
 - If markers predict less response, could those patients be selected, or targeted with different intensification?
- SPOP mutation associated with enhanced response_B abiraterone in CRPC²
- Basal subtype progresses earlier with apalutamide in nmCRPC³
- KMD5D expression was associated with resistance 1th docetaxel in CHAARTED⁴
 - 1. Sydes MR et al. Ann Oncol 2018;29:1235
 - 2. Boysen G et al. Clin Cancer Res 2018; 5585
 - 3. Feng FY et al. JAMA Oncol 2021; 7:1005
 - 4. Komura K et al. PNAS 2016; 113:6259





SOC+DocP 189 (1) 183 (7) 175 (5) 168 (7) 158 (7) 146 (4) 139 (10) 112 (2) 74 SOC+AAP 377 (3) 371 (9) 358 (16) 339 (17) 320 (12) 307 (24) 278 (9) 240 (12) 161





STAMPEDE: radiation to the prostate primary

Improved survival

- Only in low volume subset
- Patients did not receive intensified systemic therapy



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Parker CC et al. Lancet 2018 http://dx.doi.org/10.1016





Abiraterone improves survival even after XRT to primary OR docetaxel up-front: PEACE-1



ENDPOINTS rPFS

Stratified by: Bone vs visceral mets Type of castration Docetaxel (yes/no)

Subgroup	N Events/N Pts		Hazard Ratio	Hazard Ratio	pvalue*
	Abi	Control	1		
overall	249/580	370/586	-	0.54 [0.46-0.64]	
Radiotherapy					0.64
No	128/290	187/294		0.56 [0.45-0.70]	
Yes	121/290	183/292		0.52 [0.41-0.66]	
Docetaxel					0.17
No docetaxel (not yet part of SOC)	69/134	103/137		0.52 [0.38-0.71]	
No docetaxel (invest. decision)	42/ 92	56/ 96		0.77 [0.52-1.15]	
Docetaxel as part of SOC	138/354	211/353		0.50 [0.40-0.62]	
Performance Status					0.22
0	163/410	253/410		0.50 [0.41-0.61]	
1-2	86/170	117/176		0.63 [0.47-0.83]	
Type of castration					0.16
LHRH agonist	154/391	233/391		0.53 [0.43-0.65]	
LHRH antagonist	94/187	135/193		0.57 [0.44-0.75]	
Surgical castration	1/ 2	2/ 2		0.06 [0.01-0.62]	
Metastatic burden					0.41
High	157/330	234/334		0.51 [0.42-0.63]	
Low	92/250	136/252		0.59 [0.45-0.77]	
Gleason score					0.36
Inf. or equal 7	51/143	80/132		0.46 [0.33-0.66]	
Sup. or equal 8	193/425	281/438		0.56 [0.47-0.67]	

0.0

274

303

N Events/N Pts

100%

80%

60%

40%

20%

0%

No

Yes 355

0

355

rPFS

Fizazi K et al. 2021 ASCO annual meeting, abstr 5000

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1.0 <- Abi better Control better ->

1.5

SOC+Ab

(n = 355)

4.5 (3.1-NE)

139

4

16

35

0.50 (0.40-0.62)

< 0.0001

Median, v (95% CI)

Events

Time from randomization (in years)

No 137

200

Yes

61

105

HR (95% CI)*

SOC

(n = 355)

2.0 (1.8-2.3)

211

5

0

0

Metastasis directed therapy in oligomet prostate CA

Delayed time to ADT compared to observation¹ (STOMP)



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 1.
 Ost P et al. J Clin Oncol 2018; 36:446

 2.
 Phillips R et al. JAMA Oncol 2020; 6:650-9.

ORIOLE² also showed benefit for MDT

Figure 2. Clinical Outcomes of Stereotactic Ablative Radiotherapy (SABR) Compared With Observation and Benefit of Total Consolidation of Prostate-Specific Membrane Antigen Radiotracer-Avid Lesions



Does metastasis-directed therapy impact overall survival?

SABR COMET (all cancers) Median OS improved for addition of SBRT to all metastatic sites on top of standard therapy

Palma DA et al. Lancet 2019; doi.org/10/1016/S0140-6736(18)32487-5



How to incorporate for Oligomet?

Oligomet

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- Which imaging modality?¹
- How many lesions?
- What form of radiation?

Up front or at Oligoprogression?

- Extend the utility of 1st line agent²
 - Med time to next treatment initiation
 13.5 months



Modern

imaging

MO

OMD



Local treatment with metastasis-directed therapy

MFS

tCRPC

Overall

tCRPC

Overall

survival

survival

with or without ADT

Lecouvet FE et al Lancet Oncol 2018; 19:e534-545
 Deek MP et al. Eur Urol 2021; 4:447-455

Prostate-specific membrane antigen PET-CT in patients with high-risk prostate cancer before curative-intent surgery or radiotherapy (proPSMA): a prospective, randomised, multicentre study

Michael S Hofman, Nathan Lawrentschuk, Roslyn J Francis, Colin Tang, Ian Vela, Paul Thomas, Natalie Rutherford, Jarad M Martin, Mark Frydenberg, Ramdave Shakher, Lih-Ming Wong, Kim Taubman, Sze Ting Lee, Edward Hsiao, Paul Roach, Michelle Nottage, Ian Kirkwood, Dickon Hayne, Emma Link, Petra Marusic, Anetta Matera, Alan Herschtal, Amir Iravani, Rodney J Hicks, Scott Williams, Declan G Murphy, for the proPSMA Study Group Collaborators*

	Ν	Positive	Negative	AUC (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)
		True/False	True/False			
Primary analysis						
Any metastatic disease	150	18/9	94/29	-	H	₽
	145	34/2	103/6		-	■ ⊢ ■ →
Pelvic nodal	150	9/4	106/31			
	145	29/1	109/6		•	■ ⊢ ∎1
Distant metasases	150	13/9	117/11	-		
	145	22/1	120/2			
Sensitivity analysis: equ	uivocal l	esions treated	as positive		—	_
Any metastatic disease	150	26/35	68/21	H	⊢∎ −1	⊢
	145	35/11	94/5		·	₩ ⊢∎ -1
Pelvic nodal	150	11/11	99/29	-	H	₩ ₩₩
	145	29/2	108/6		-	■ ⊢ ∎→
Distant metasases	150	16/37	89/8	H	H 	F
	145	22/11	110/2		-	H +#+
Conventional imaging	g 📕 P	SMA PET-CT		0 25 50 75	100 0 25 50 75	100 0 25 50 75 100



Figure 2: Accuracy, sensitivity, and specificity of conventional imaging compared with PSMA PET-CT

PSMA=prostate-specific membrane antigen. AUC=area under the curve.

- Series of 10 men with mHSPC treated with radical prostatectomy followed by 6 doses of radium-223

 No ADT
- Pain relief noted in all subjects
 - Median 44% decrease after cycle 3
- Radiographic improvement in bone scans was noted

Wenter V et al. Oncotgarget 2017; 8:44131-40

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Could radiopharmaceuticals enhance eradication of micro-metastatic disease?

- ADRRAD: 30 men with mHSPC treated with ADT, up-front docetaxel, and pelvic radiation followed by 6 doses of radium-223
- Objective responses noted using whole body MRI
- No bone support; 10% had fragility fractures

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Turner PG et al. Clin Cancer Res 2021; DOI: 10.1158/1078-0432.CCR-21-0685



VISION trial: Lu177-PSMA compared to "standard care"

Morris et al, ASCO 2021



TOTAL HEAL Advancing Care through Educ

Nearly all tumors express PSMA Phenotypic selection by PET scan used in VISION, Thera-P (in CRPC)

- 10-15% will not qualify

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Lu-177-PSMA-617: moving into mHSPC

- Advantage of targeting both bone and soft tissue
 - ?will spare normal bone
- Phenotypic selection by PET scan
 - mHSPC has PSMA expression but less established rate
- Moving into mHSPC:
 - **PSMADDITION** (NCT 04720157) Randomized n=1126 (SST +/- Lu177-PSMA)
 - Bullseye (NCT04443062) Oligomet, randomized to Lu177-PSMA vs observation
- ?Concern for late 2nd malignancy risk? (2% in VISION vs 1% placebo)



Next step: add novel agents in mHSPC

- Ipatasertib: Pi3K/AKT
 - Modest benefit added to abiraterone in mCRPC in iPATential
 - But suppression of AR upregulates Pi3K/AKT so maybe need early application?
 - Capivasertib being studied in mHSPC¹
- Olaparib, Rucaparib, Talazoparib: PARP
 - Molecularly selection identifies those who benefit in CRPC
 - ?different role in mHSPC due to cross-talk with AR
 - Talazoparib trial in mHSPC (City of Hope)





Cityof Hope1.George D et al, GU ASCO 2021 abstr TPS1782.Kasparian S et al. GU ASCO 2021 abstr TPS 5097

IPATential150: results in mCRPC

rPFS in the PTEN-loss (by IHC) population

Ipatasertib significantly improved radiographic progression-free survival (rPFS) in PTEN-loss mCRPC, but not in the intention-to-treat (ITT) population



Data cut-off date: 16 March 2020; ^a Stratified for prior taxane-based therapy and PSA-only progression factor; ^b Statistically significant at a = 0.05 level; ^c Stratified for prior taxane-based therapy, PSA-only progression factor, and tumour PTEN loss status (by IHC); ^d Did not meet statistical significance a = 0.01 level AAP, abiraterone acetate + prednisone; CI, confidence interval; HR, hazard ratio; IHC, immunohistochemistry; lpat, ipatasertib; mCRPC, metastatic castration-resistant prostate cancer; Pbo, placebo; PSA, prostate specific antigen; de Bono J, et al. ESMO 2020. Abstract #LBA4. Oral presentation

rPFS in the ITT population

252 (46)

65.3 (61.1-

69.5)

Pi3K/AKT pathway: the biomarker is key

 Ipatasertib in mCRPC added to abiraterone improved survival in PTEN loss group with stronger IHC loss¹

Hazard ratio for progression or death (95% CP	No. of patients	PTEN	Hazard ratio for progression or death (95% CI)	No. of patients		PTEN
0.87 (0.73 to 1.04	978	100%	0.84 (0.71 to 1.00)		1101	All pts
• 0.92 (0.75 to 1.13	766	90%	0.84 (0.69 to 1.02)		771	10%
0.95 (0.76 to 1.18	077	80%	0.81 (0.66 to 0.99)		684	20%
0.95 (0.76 to 1.19	639	70%	0.82 (0.66 to 1.02)		618	30%
0.97 (0.77 to 1.22	612	60%	0.82 (0.65 to 1.03)	-	575	40%
• 0.92 (0.72 to 1.16	578	50%	0.77 (0.61 to 0.98)	···· • ···	523	50%
0.87 (0.68 to 1.12	526	40%	0.72 (0.56 to 0.92)	•	489	60%
0.87 (0.67 to 1.14	483	30%	0.72 (0.56 to 0.93)	•	462	70%
• 0.90 (0.67 to 1.21	417	20%	0.71 (0.54 to 0.92)	· • •	424	80%
0.87 (0.62 to 1.21	330	10%	0.72 (0.53 to 0.97)	•	335	90%
0.84 (0.71 to 1.00	1101	All pts	0.65 (0.39 to 1.08)	•	123	100%
1.0 3.0	0.3		3.0	1.0	0.3	

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DeBono JS et al. GU ASCO 2021; abstr13 Sweeney C et al. Lancet 2021; 398:131

 The effect was also more pronounced when there was more PTEN loss (A) or Pi3K/AKT pathway alteration (B) by NGS







On Study





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2020 PCF + Pfizer Award Dorff /Kittles / Burnham / Sun



Identifying androgen receptor and genomic characteristics that define populations of patients with mHSPC who benefit from early PARP inhibition therapy with talazoparib

A phase II trial in mHSPC (NCT04734730)

Sequencing in mCRPC

- Most patients are already post ARTA
- - switching to the other ARTA not very successful
- PROFOUND shows better survival for Olaparib compared to 2nd ARTA
 - For those with HRD
- Combinations also not very successful
 - ARTA + ARTA not successful up front or layered
 - Combinations with ARTA and targeted or radiopharmaceutical may work out



ARV7 explains some cross-resistance between ARTA

Antonarakis et al, NEJM 2014.

ARV7 Predicts Less Response to Enzalutamide and Abiraterone

A Enzalutamide-Treated Patients









But response to Docetaxel is not impacted by ARv7

Antonarakis et al, 2015.

TheraP (ANZUP 1603) Hofman MS et al GU ASCO 2021

Median age 72 (67-77) bPSA 110 (44-245)



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PROFOUND: phase III data with PARP inhibitors

rPFS 7.39 months vs 3.55 mo in cohort A



- Previous taxane
- Measurable disease

Hussain M, et al. Presented at ESMO 2019 Abstract #LBA12.



Overall survival in Cohort A (BRCA 1&2, ATM)

Hussain M, et al. NEJM 2020; 383:2345







OS in cohort B (other mutations)





Hussain M, et al. NEJM 2020; 383:2345

Rucaparib in mCRPC with BRCA alterations

Abida W, et al. JCO 2020; 38:3763





Rucaparib in men with non-BRCA DDR alterations



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Abida W, et al. Clin Cancer Res 2020; 26:2487



DDR gene alteration (D). PSA increases for patients 1–5 were 319%, 142%, 126%, 109%, and 106%; bars were capped at

PARP inhibitors: moving into combinations and into localized disease

	Disease Stage	Agent	NCT
NRG-GU007	High risk localized	Niraparib (with definitive XRT + ADT)	NCT04037254
ASCLEPIuS	High risk localized	Niraparib (with SBRT + ADT + abiraterone)	NCT04194554
PCCTC	Biochem recur	Olaparib + durvalumab	NCT03810105
ROAR	Biochem recur with "BRCAness"	Rucaparib	NCT03533946
COMRADE	mCRPC	Olaparib + radium223	NCT03317392
KEYLYNK-010	mCRPC	Olaparib + pembro	NCT03834519
PLATI-PARP	mCRPC, multi- pretreated	Rucaparib + Docetaxel + Carboplatin	NCT03442556
Bipolar UW	mCRPC	Olaparib + testosterone	NCT03516812
Javelin PARP medley	mCRPC	Talazoparib + avelumab	NCT03330405

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CARD: cabazitaxel more effective than abi/enza (ASTI) post abi/enza

- Men previously treated with both docetaxel and abi or enza
 - Median age 70 (46-85)
 - 70% had pain progression
- ORR 37% cabazi, 12% ASTI
- Grade <u>></u> 3 Adverse events in 56.3% with Cabazi, 52.4% with ASTI
 - 44.7% grade 3+
 neutropenia- 3.2% febrile
 - Grade 3+ Cardiac
 disorders 4.8% with ASTI



deWit R et al, NEJM 2019; 381:2506-18



Combinations of ARTA have not been successful

- A031201 enza +/- abiraterone in mCRPC¹
 - No diff in OS, higher rate grade 3-5 AEs on combination
- Neoadjuvant studies also confirm lack of added benefit from abiraterone + apalutamide^{2,3}
 - 3% pCR rate with triple therapy, similar minimal residual disease rate²

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- 10% pCR with triplet vs 8% with doublet³
 - 1. Morris MJ et al. ASCO 2019 abstr 5008
 - 2. Efstathiou E et al. J Clin Oncol 2020; abstr 5504
 - 3. McKay R et al J Clin Oncol 2019; 37"923-31.



NCT01949337

Combinations of ARTA with Radium223

- ERA223 identified increased fracture risk when abiraterone is used together with radium223¹
 - No clinical benefit identified
- Shore et al (ASCO 2020) found this varied based on concurrent vs "layered" use²
 - Osteoporotic fractures; bone support mitigated the risk
- EORTC 1333/ PEACE III³
 - Excess fractures for combination of enza + rad223
 - bone support eliminated the increased risk
 - Unclear yet whether advantage for enza w/rad223
 - 1. Smith M et al, Lancet Oncol 2019; 20:408-19.

NCT02194842

- 2. Shore N et al, ASCO 2020 abstr
- 3. Tombal BF et al. ASCO 2019 abstr 5007



Learning more about Radium223 in combination with enzalutamide: USC + CoH IIT

		Con		Pro		Plan
Does canc	s rad223 kill prostate er cells?	PSA doesn't alv decline	vays	Pain can impl improved	rove, OS	Pathology: tumor infiltration, necrosis, ki67
Does immu	s rad223 activate une system?	Via STAT3 coul angiogenic imm suppress	d be pro- iune	Increased mu due to tumor	ic1, mhc etc cell death	Flow cytometry, cytokines, immune infiltrates
Does healt	s rad223 impact bone h?	Reduced fractu ALSYMPCA	res in	Increased fra ERA223, PEA	ctures \CE3	Pathology for osteoblast/ osteoclast activity
	mCRPC with bo metastases chemotherapy-na	ne aïve	adium223 55 kB Enzal Enzal	q/kg IV q4 weeks x utamide 160 mg PO utamide 160 mg PO	6 daily daily	
Cityoff	Норе	Baseline Bone marrow, correlative blood CTCs	Cycle 2, d1 CTC, correlative blood	Cycle 4, d1 Bone biopsy	Off study: CTC, correlative blood	

Time to radiographic/clinical progression

1.00

0.75

옵 0.50

0.25

0.00



Immune checkpoint inhibitor therapy in mCRPC: Pembrolizumab (KEYNOTE-199)



Top right: objective response Bottom right: PSA changes

DeBono JS. ASCO 2018; oral present

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Immune checkpoint inhibitors in mCRPC: selcted by MSI

MSI is present in 3% of prostate cancers

Response to pembrolizumab about 50% (PSA, RECIST)

Abida W et al, JAMA Oncol 2019; 5:471-8

Combinations: checkpoint + checkpoint (Ipi + Nivo)

- <1/3 received all 4 induction doses
- Chemo naïve: 25% objective response with 2 (6%) CR
 - PSA response 17.6%
- Chemo pre-treated: 10% objective response, 2 (6.7%) CR
 - PSA response 10%
- HRD+ had greater response

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Sharma P et al, Cancer Cell 2020; 38:489-99

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Agarwal N et al. GU ASCO 2020 abstr 139

Prostate Cancer Challenges for Immunotherapy

TGFb negatively impacts T cell metabolism, differentiation and function (UPenn)

Persistence is problematic (?stem/memory selection)

Homing to tumor is critical (COH future: add radiation?)

MDSC: (COH future – add STAT3 inhibitor)

Dorff et al (in press, Clin Cancer Res)

Phase I Clinical Trial to Evaluate PSCA-BBζ CAR T Cells in mCRPC

PSCA+ metastatic castration resistant prostate cancer •

(Clinical PI: Tanya Dorff, MD, Research PI: Saul Priceman, PhD) - enrolling

PSCA-CAR in mCRPC phase 1 trial

Foundation Curing Together.

BiTE antibody therapy

- Only approved BiTE is blinatumomab for ALL.
- AMG160 is half-life extended dual-targeted antibody to PSMA and CD3
 - Dosed every 2 weeks
- AMG509 is 3-headed (2 for target antigen
 - Dosed weekly

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PSA/CTC Responses (n = 13–35)				
Response	All, n (%)			
PSA response, confirmed*	8 (27.6)			
PSA response, unconfirmed [†]	4 (11.4)			
CTC0 response [‡]	3 (23.1)			

RECIST Responses (n = 15)						
Response	All, n (%)					
Partial response, confirmed	2§ (13.3)					
Partial response, unconfirmed	1§(6.7)					
Stable disease	8 (53.3)					

* ≥ 30% reduction based on 29 patients with 2 postbaseline PSA results ↑ ≥ 30% reduction based on 35 patients with measurable PSA at baseline

Based on 13 patients with baseline CTC > 0 and postbaseline CTC assessment

11 PR(u) and 1 PR confirmation occurred after 20 July 2020

Efficacy Results AMG160 phase 1 (BiTE targeting PSMA)

CTC = circulating tumor cell; DLT = dose-limiting toxicities; NE = not evaluable; PSA = prostatespecific antigen; PR = partial response; Q2W = every 2 weeks; RECIST = Response Evaluation Criteria in Solid Tumors; SD = stable disease; (u) = unconfirmed

* PR occurred before but reported after 20 July 2020 data cutoff; PR (u) reported after 20 July 2020 data cutoff

¹ Checkered bars indicate cohorts with optimised cycle 1 priming strategies

- PSA reductions (best response) were dose dependent and occurred in 24/35 (68.6%) evaluable patients (20 July 2020)
- PSA reductions > 50% occurred in 12/35 (34.3%) evaluable patients

PSA ≈ prostate-specific antigen; PSA50 ≈ PSA decrease of ≥ 50%; Q2W ≈ every 2 weeks

* Best PSA reductions at any time point in evaluable patients included those who had received ≥ 1 dose of AMG 160 and had measurable baseline PSA

[†]Checkered bars indicate cohorts with optimised cycle 1 priming strategies

Indicates patient who had failed prior LuPSMA treatment

10

Tran B et al, ESMO 2020

- mHSPC can be treated with much greater intensity to yield enhanced outcomes by adding abiraterone, enza/apa-lutamide, docetaxel +/- radiation to prostate primary
 - Additional agents in testing
- The future of CRPC will see further combinations and individualization, hopefully with molecular selection
 - Additional exciting new treatments coming: sabizabulin & PT-112
- Advanced immunotherapy (T cell centric) may overcome some of the immune resistance of prostate cancer
 - The hope is durable remissions

