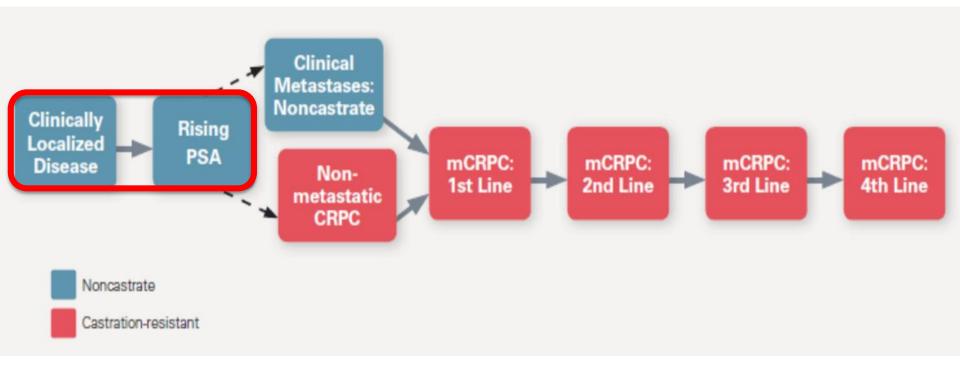
# HOW TO MANAGE PROSTATE CANCER IN 2023

**Ana Plata Bello**Médico Adjunto CHUC





1. New developments in High Risk localised PC & BCR setting



**ADT** have been the gold standard treatment in **ADVANCED NON METASTATIC RECURRENT PC** 

Abiraterone acetate and prednisolone with or without enzalutamide for high-risk non-metastatic prostate cancer: a meta-analysis of primary results from two randomised controlled phase 3 trials of the STAMPEDE platform protocol

Gerhardt Attard, Laura Murphy, Noel W Clarke, William Cross, Robert J Jones, Christopher C Parker, Silke Gillessen, Adrian Cook, Chris Brawley,
Claire L Amos, Nafisah Atako, Cheryl Pugh, Michelle Buckner, Simon Chowdhury, Zafar Malik, J Martin Russell, Clare Gilson, Hannah Rush,
Jo Bowen, Anna Lydon, Ian Pedley, Joe M O'Sullivan, Alison Birtle, Joanna Gale, Narayanan Sirbari, Canys Thomas, Jacob Tanguay, John Wagstaff,
Prantik Das, Emma Gray, Mymoona Alzoveb, Omi Parikh, Angus Robinson, Isabel Syndikus, James Wylie, Anjali Zarkar, George Thalmann,
Johann S de Bono, David P Dearnaley\*, Malcolm D Mason\*, Duncan Gilbert, Ruth E Langley, Robin Millman, David Matheson, Matthew R Sydest,
Louise C Brownt, Mahesh K B Parmart, Nicholas D Jamest, on behalf of the Systemic Therapy in Advancing or Metastatic Prostate cancer:
Evaluation of Drug Efficacy (STAMPEDE) investigators‡

Pre-specified subgroup analysis for Highrisk M0 from 2 STAMPEDE trials

**ABI+ADT VS ADT** 

### High-risk M0 defined on **CONVENTIONAL IMAGING**:

- Synchronous
  - N0: at least 2/3 criteria of T3-T4, GG4-5, PSA≥40 ng/dl
  - N1
- Metachronous
  - PSA≥4 ng/dl with a doubling time <6 months or PSA≥20 ng/dl (ADT interval ≥12 months and total treatment ≤12 months)</li>

#### **INTENSIFYING TREATMENT IN High Risk** Abiraterone acetate and prednisolone with or without localised PC & BCR SETTING enzalutamide for high-risk non-metastatic prostate cancer: a meta-analysis of primary results from two randomised

controlled phase 3 trials of the STAMPEDE platform protocol Gerhardt Attard, Laura Murphy, Noel W Clarke, William Cross, Robert I Jones, Christopher C Parker, Silke Gillessen, Adrian Cook, Chris Brawle Claire L Amos, Nafisah Atako, Cheryl Pugh, Michelle Buckner, Simon Chowdhury, Zafar Malik, J Martin Russell, Clare Gilson, Hannah Rush, lo Bowen, Anna Lydon, Ian Pedley, Ioe M O'Sullivan, Alison Birtle, Ioanna Gale, Narayanan Srihari, Carys Thomas, Iacob Tanauay, Iohn Waastafi Prantik Das, Emma Gray, Mymoona Alzoueb, Omi Parikh, Angus Robinson, Isabel Syndikus, James Wylie, Anjali Zarkar, George Thalmann lohann S de Bono, David P Dearnaley\*, Malcolm D Mason\*, Duncan Gilbert, Ruth E Langley, Robin Millman, David Matheson, Matthew R Sydes Louise C Brown†, Mahesh K B Parmar†, Nicholas D James†, on behalf of the Systemic Therapy in Advancing or Metastatic Prostate cance

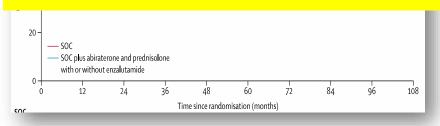
valuation of Drug Efficacy (STAMPEDE) investigators

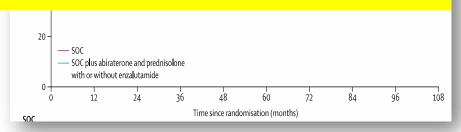
**ABI+ADT vs ADT** 

80



### AA IS THE NEW SOC IN HRPC PATIENTS THAT MEET STAMPEDE INCLUSION CRITERIA





#### RELAPSED PATIENTS UNDER-REPRESENTED

Abiraterone and prednisolone trial Abiraterone and prednisolone plus enzalutamide tria

Overal

111/459 69/527

123/533

0.54 (0.43-0.68) 0.53 (0.39-0.71) 0.53 (0.44-0.64) 100% Favours combination therapy Favours SOC

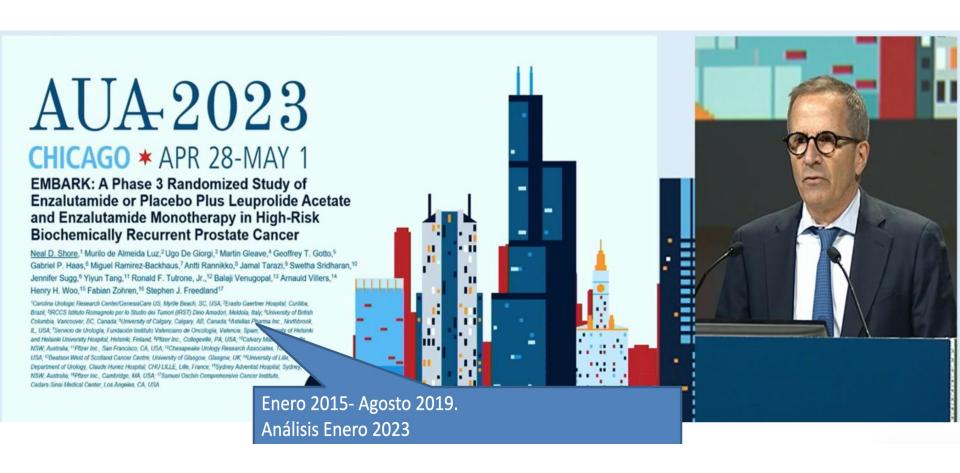
Abiraterone and prednisolone plus enzalutamide trial Overa

52/527

0.54 (0.39-0.76) 0.60 (0.48-0.73)

Favours combination therapy Favours SOC

Attard G. Ft al. The lancet 2022

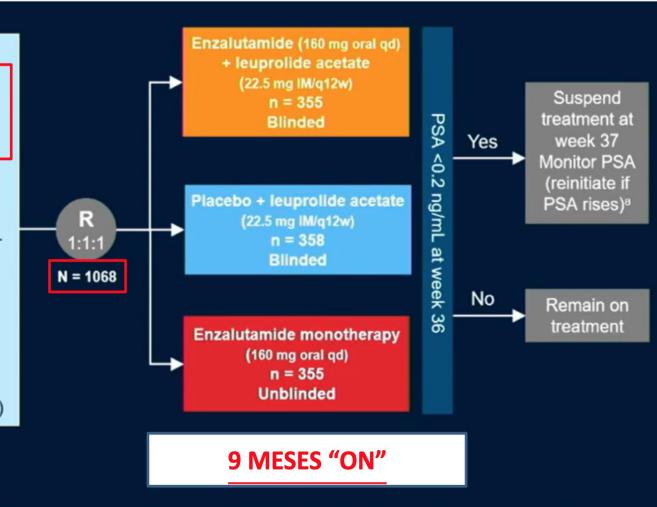


#### Patient population:

- Screening PSA ≥1 ng/mL after RP and at least 2 ng/mL above the nadir for primary EBRT
- PSADT ≤9 mo
- No metastases on bone scan or CT/MRI per central read
- Testosterone ≥150 ng/dL
- Prior hormonal therapy ≥9 mo prior to R (neoadjuvant/adjuvant for ≤36 mo OR ≤6 mo for rising PSA)

#### Stratification factors:

- Screening PSA (≤10 ng/mL vs. >10 ng/mL)
- PSADT (≤3 mo vs. >3 to ≤9 mo)
- · Prior hormonal therapy (yes vs. no)



<sup>a</sup>Study treatment was suspended once at week 37 if PSA was <0.2 ng/mL and restarted when PSA was ≥5.0 ng/mL (without prior RP) and ≥2 ng/mL (prior RP). <sup>b</sup>Intent-to-treat population. <sup>c</sup>Primary endpromission and enzalutamide monotherapy are alpha-protected. *P*-value to determine significance for OS of combination and monotherapy treatment comparisons was dependent on outcomes of print population. BICR, blinded independent central review, CT, computed tomography; d, day; EBRT, external beam radiotherapy; IM, intramuscular; MFS, metastasis-free survival; mo, month; MRI, magnet prostate-specific antigen; PSADT, PSA doubling time; q, every, R, randomization; RP, radical prostate-tomy, w, weeks.



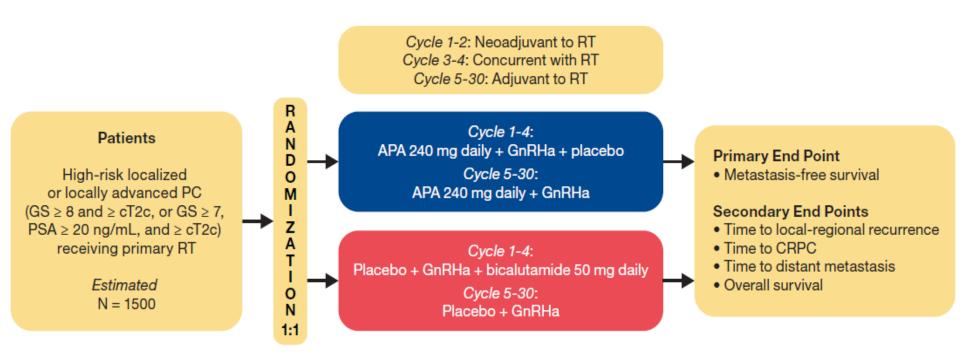
A consistent treatment effect was seen for investigator-assessed MFS: HR (95% CI): 0.47 (0.37–0.67); P<0.0001

Data cutoff: January 31, 2023. Symbols indicate censored data. \*HR was based on a Cox regression model with treatment as the only covariate stratified by screening PSA, PSADT, and prior hormonal therapy as reported in the IWRS; relative to leuprolide acetate <1 favoring enzalutamide combination; the two-sided P-value was based on a stratified log-rank. CI, confidence interval; HR, hazard ratio; IWRS, interactive web response system; NR, not reached.



Data cutoff: January 31, 2023. Symbols indicate censored data. \*The HR was based on a Cox regression model with treatment as the only covariate stratified by screening PSA, PSADT, and prior hormonal therapy as reported in the IWRS; relative to leuprolide acetate <1 favoring enzalutamide combination; the two-sided P-value is based on a stratified log-rank test.

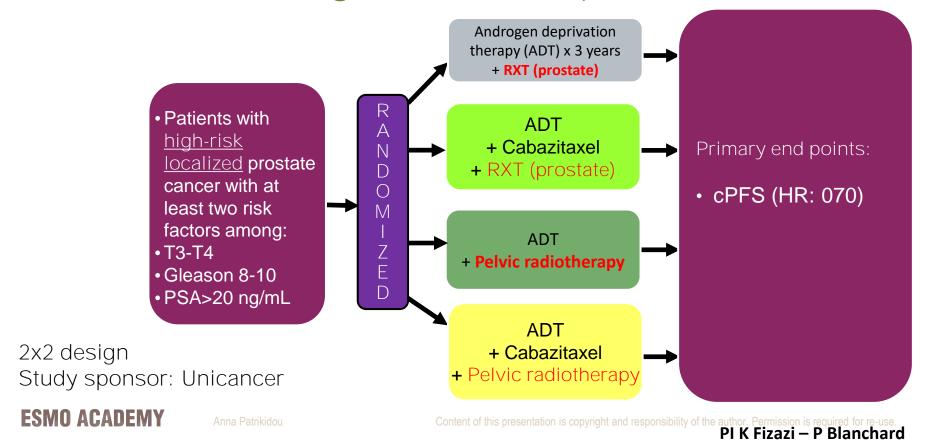
ATLAS: a Phase 3 Trial evaluating the efficacy of Apalutamide in pts with Localised or Locally Advanced CaP receiving primary RT

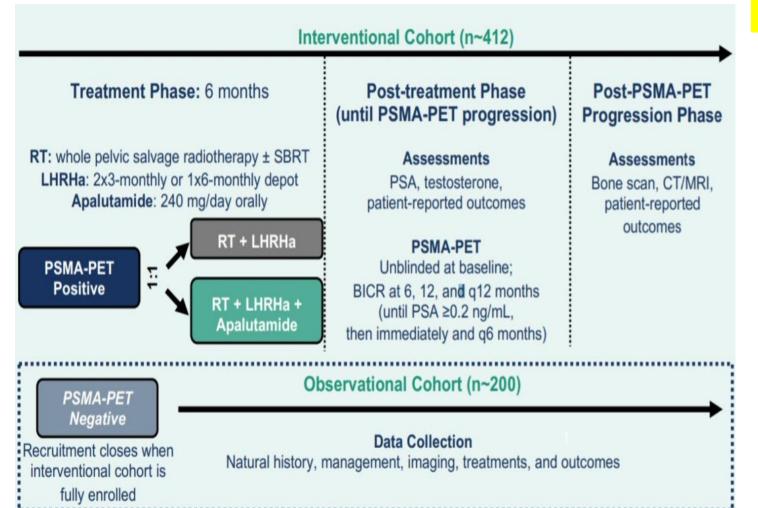


Similar trials with Enza, Daro,...

PA, apalutamide; PC, prostate cancer; GS, Gleason score; CRPC, castration-resistant PC.

### PEACE-2: European Phase III Trial of Cabazitaxel and Pelvic Radiation in high-risk localised prostate cancer



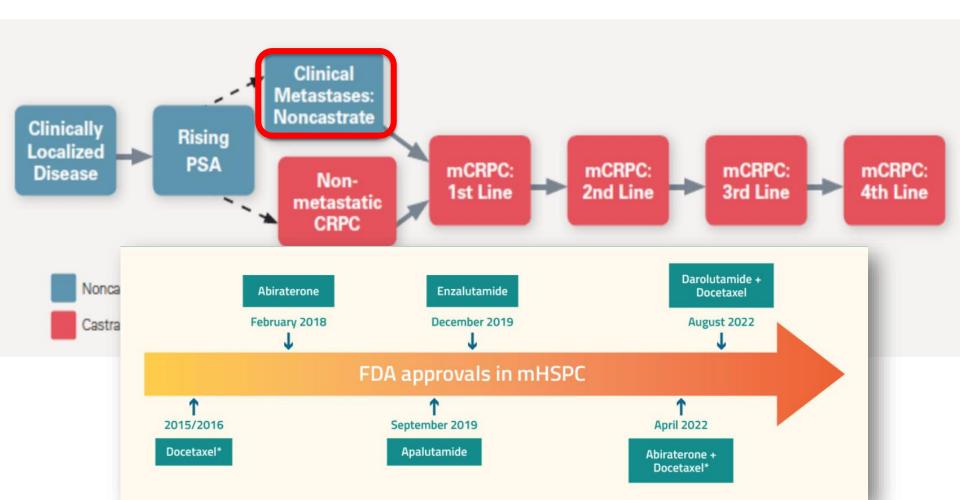


#### **PET-PSMA**

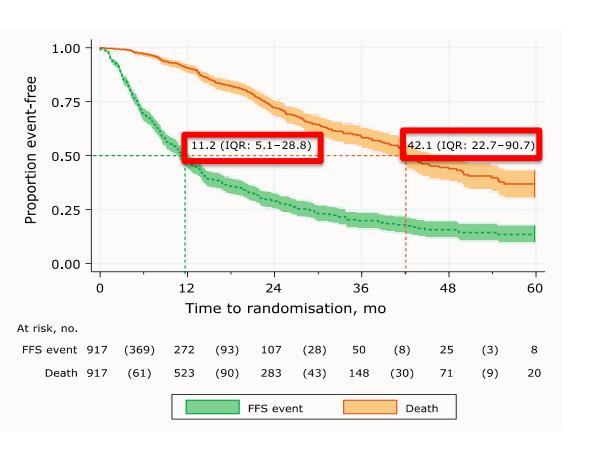
#### PRIMORDIUM TRIAL



- 1. New developments in High Risk localised PC & BCR setting
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## 2. <u>ADT is mandatory in metastatic PC</u> and must be continued throughout the disease



### STAMPEDE trial: control group

(ADT +/- Bicalutamide +/-RT)

FFS (median)	11.2 m
OS (median)	42.1 m
2-yr OS	72%

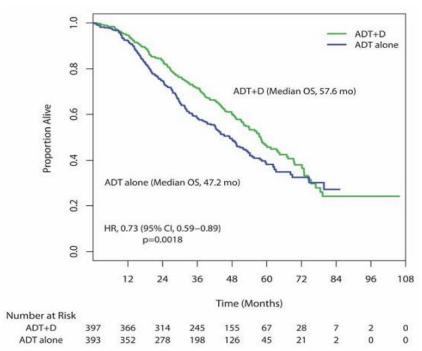
### BUT... ADT alone is SUBOPTIMAL and should be COMBINED with other agents

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# 3. ADT alone in metastatic PC is INFERIOR TO ADT+DOCETAXEL

#### Phase III trials: ADT + Docetaxel vs ADT alone

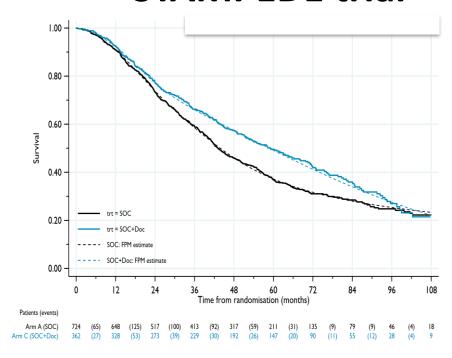
#### **CHAARTED** trial



HR: 0.73 (95%CI 0.59-0.89)

P=0.0018

#### **STAMPEDE trial**

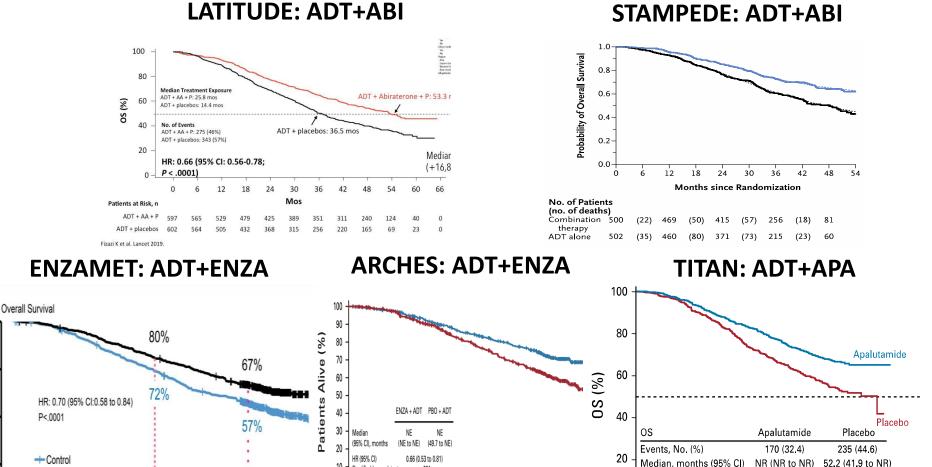


HR: 0.81 (95%CI 0.69-0.95)

P=0.016

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# 4. <u>ADT alone</u> in metastatic PC is <u>INFERIOR TO</u> <u>ADT+NOVEL HORMONAL AGENTS</u>



HR (95% CI)

0.65 (0.53 to 0.79)

< .0001

36

30

Months

Fizazi et al. NEJM. 2017, James et al. NEJM. 2017, Davis et al. NEJM 2019, Armstrong A. et al. JCO 2022;40, Kim. et al. JCO 2021.

Time (months)

0.75

ш

0.25

Fnzalutamide

Months

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- 5. HOW TO SELECT between ADT+ NOVEL HORMONAL AGENTS OR DOCE?

### No trials have compared ADT + Docetaxel vs a ADT + a novel hormonal agent (NHA)

	FUP	OS tto		OS co	OS control HR (95%CI)		Δ 3yr OS	n value
	FUP	Median	3-yr	Median	3-yr	ПК (95%СІ)	д зуг оз	p-value
CHAARTED	53.7 m	57.6 m	~71%*	47.2 m	~58%*	0.72 (0.59-0.89)	~13%	p=0.0018
STAMPEDE (Docetaxel)	78.2 m	59.1 m	~66%*	43.1 m	~59%*	0.81 (0.69-0.95)	~7%	p=0.003
LATITUDE	51.8 m	53.3 m	~65%*	36.5 m	~51%**	0.66 (0.56-0.78)	~14%	p<0.001
STAMPEDE (Abiraterone)	73 m	79.2 m	~73%*	45.6	~60%*	0.60 (0.50-0.71)	~13%	p<0.001
ENZAMET	68 m	NR	80%	73.2 m	72%	0.67 (0.52-0.86)	8%	p=0.002
ARCHES	44.6 m	NR	78%	NR	69%	0.66 (0.53-0.81)	9%	p<0.001
TITAN	44 m	NR	-	52.2 m	-	0.67 (0.51-0.89)	-	p=0.005

### Heterogeneity in population included in trials

	CHAARTED	STAN	<b>IPEDE</b>	LATITUDE	ENZAMET	ARCHES	TITAN	CHART
	CHAARTED	Docetaxel	Abiraterone	LAITIODE	ENZAMET	ARCHES	IIIAN	CHARI
Patients	mHSPC	mHSPC & hig	h risk nmHSPC	High risk mHSPC	mHSPC	mHSPC	mHSPC	mHSPC
Primary endpoint	OS	(	OS	OS & rPFS	OS	rPFS	OS	OS & rPFS
Comparator arm	ADT	SOC	SOC	ADT	ADT +/- Doce	ADT + AA +/- Doce	ADT +/- Doce	ADT + AA
Follow-up	53.7 m	78.2 m	73 m	51.8 m	68 m	44.6 m	44 m	30.4 m
High volume	64.9%	56%	52%	-	52.3%	63.2%	62.8%	100%
Prior local therapy	27.2%	5%	7%	4%	-	12-26%	16.4%	~10%
Docetaxel for mHSPC	0	0	0	0	45%	15.5%	10.7%	0
ECOG PS 2	1.5%	NR	NR	?	0	0	0	0
Age	64 a	66 a	66 a	67 a	69 a	70 a	69 a	69 a
Gleason ≥ 8	60.7%	67.5%	77.3%	97.6%	58.3%	66%	67.4%	81.5%
Visceral metastases	15%	5%	6%	12-17%	11.5%	?	12.1%	20%

Sweeney et al. NEJM 2015. James et al. Lancet 2015. Fizazi et al N Eng J Med 2017. James et al. N Eng J Med 2017

ADT+ novel hormonal agents have a better toxicity profile

	Grade ≥ 3
Fatigue	0.3%
Allergic reaction	3.3%
Neuropathy	0.7%
Fatigue	1.7%
Anemia	0.3%
Thrombopenia	0.3%
Neutropenia	12.1%
Febrile neutropenia	6.1%

#### **DOCETAXEL**

#### **ABIRATERONE**

	All Grades	G ≥ 3
Hypertension	37%	20%
Hypokalemia	20%	11%
AST/ALT increase	16%	6%
Hyperglycemia	13%	4%
Cardiac disorder	12%	4%
Fatigue	13%	2%

#### **APALUTAMIDE**

	All Grades	Grade ≥ 3
Rash	27.1%	6.3%
Fatigue	19.7%	1.5%
Fall	7.4%	0.8%
Hypothiroidism	6.5%	0
Fracture	6.3%	1.3%
Seizure	0.6%	0.2%

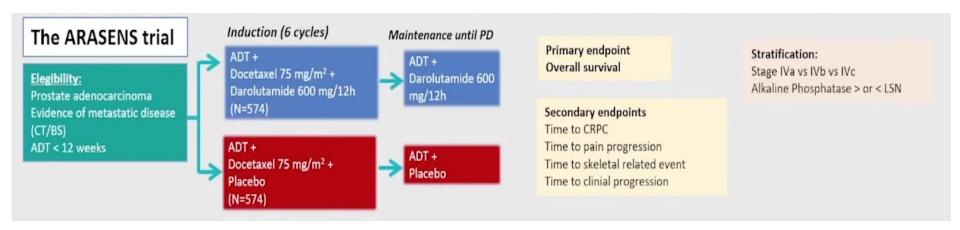
#### **ENZALUTAMIDE**

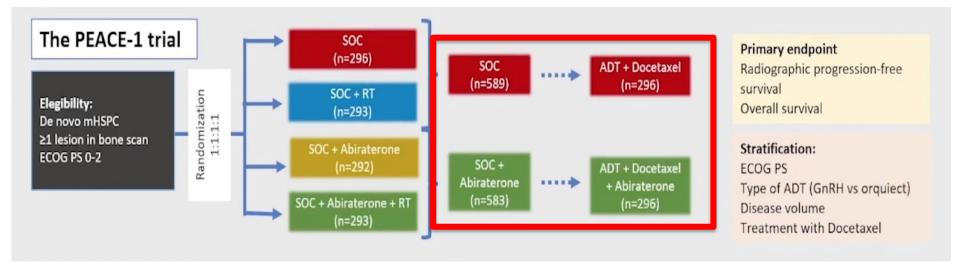
	All Grades	Grade ≥ 3
Seizures	0.3%	0.3%
Hypertension	8.6%	3.3%
Cognitive/memory	4.5%	0.7%
Fatigue	24.1%	1.7%
Fall	3.7%	0.3%
CV events	4%	1.5%

ADT+NHA are the prefered treatment option based on oral administration & a more favorable toxicity profile

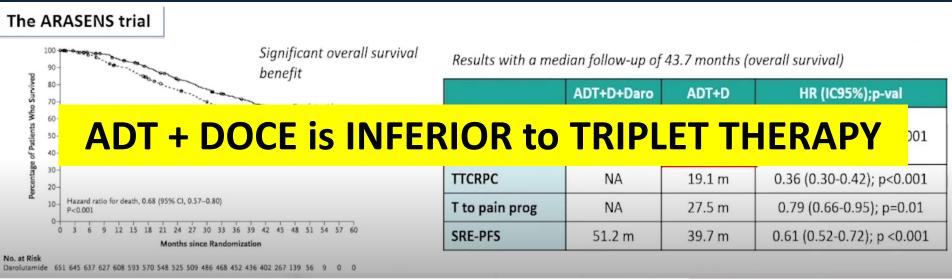
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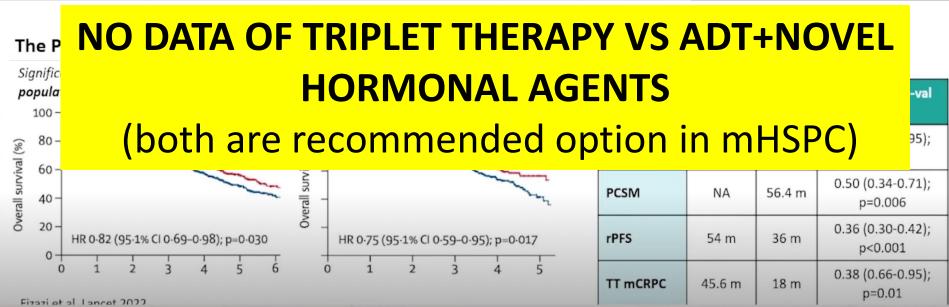
# 6. Is more better? TRIPLET THERAPY in mHSPC





# 6. Is more better? TRIPLET THERAPY in mHSPC





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**Burden** of metastatic disease & **timing of presentation** have a prognostic value

#### **VOLUME/RISK**

Overall survival in pts treated with ADT alone (control arm)

	Med	lian	5 yr OS	
	Hi vol	Low vol	Hi vol	Low vol
CHAARTED	34,4m	NR	~27%*	~54%*
STAMPEDE (Docetaxel)	35,2m	76,7m	~23%*	~56%*
STAMPEDE (Abi)**	~34m*	NR	28%	55%

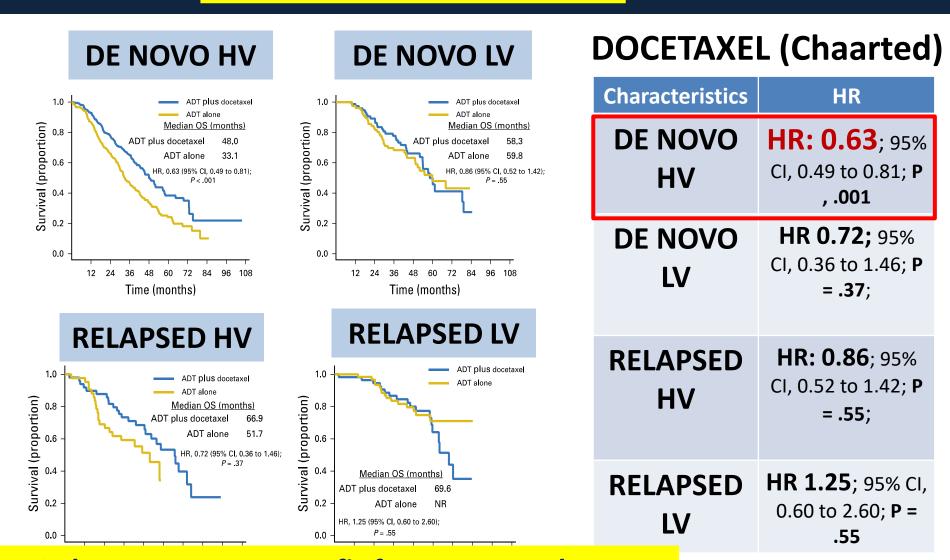
<sup>\*</sup>Estimation based on the inspection of the Kaplan Meier curves

#### PRIOR THERAPY

Overall survival in pts treated with ADT alone (control arm)
GETUG-AFU-16, STAMPEDE, CHAARTED trials

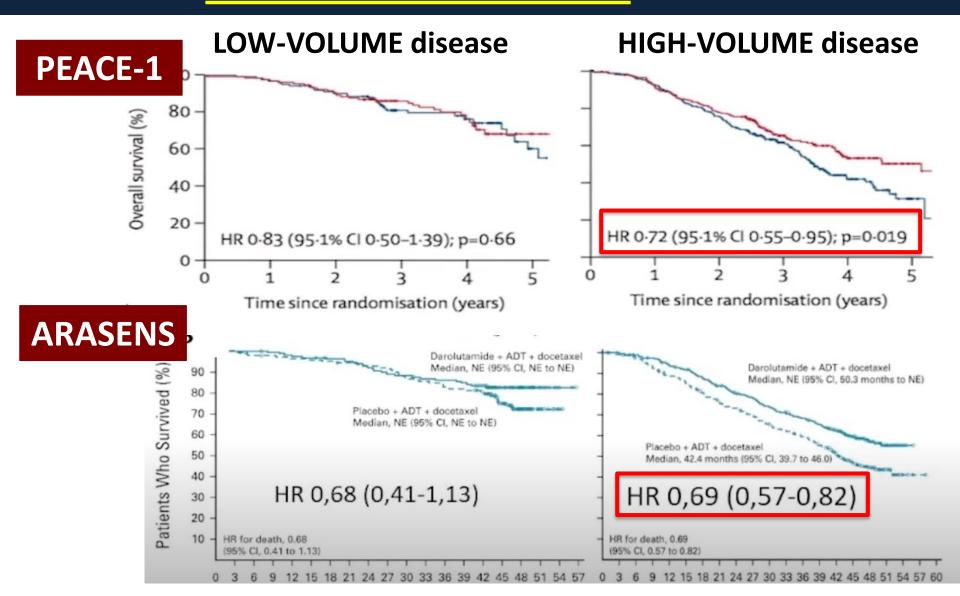
Overall survival	5-yr OS	
High valuma	Synchronous (n=1044)	26%
High volume	Metachronic (n=132)	28%
t accordings	Synchronous (n=582)	52%
Low volume	Metachronic (n=229)	72%

<sup>\*\*</sup>Using LATITUDE high/low risk criteria



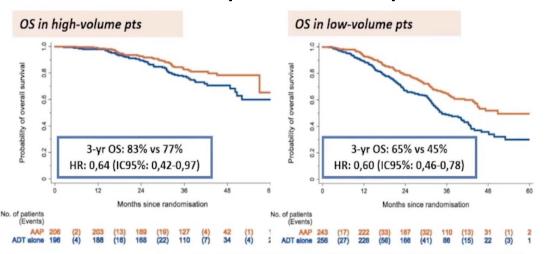
Only De Novo HV Benefit fron Docetaxel+ADT

Kyriakopoulos et al. JCO 2018



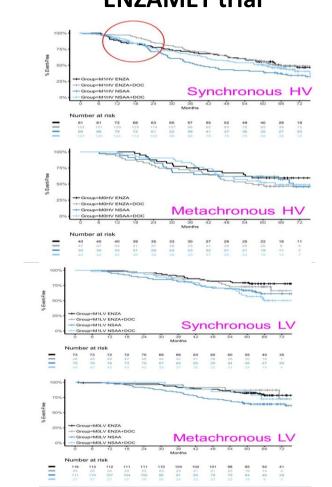
NOVEL HORMONAL THERAPIES BENEFIT INDEPENDENT OF DISEASE VOLUME

#### **STAMPEDE (ABIRATERONE)**



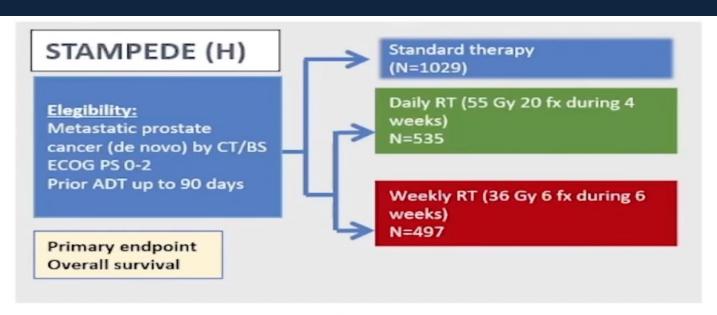
Trial	HR low volume	HR high volume
ENZAMET	0.43 (0.26-0.72)	0.80 (0.59-1.07)
ARCHES	0.66 (0.43-1.03)	0.66 (0.52-0.83)
TITAN	0.36 (0.22-0.57)	0.53 (0.41-0.67)

NOVEL HORMONAL THERAPIES
BENEFIT INDEPENDENT OF TYPE
ENZAMET trial



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- 8. Role of local treatment- RT to the primary tumor in mHSPC

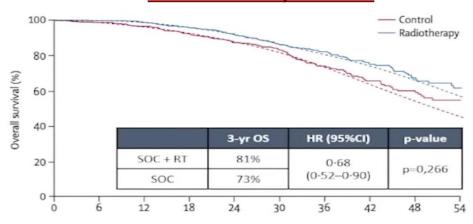
# 8. Role of local treatment- RT to the primary tumor in mHSPC



Global population: no difference in overall survival

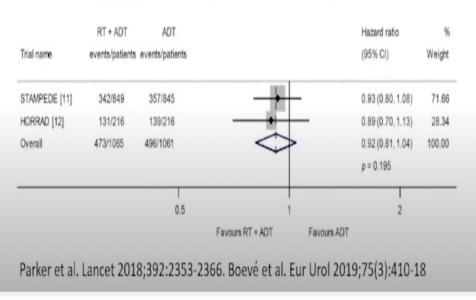
	soc	SOC + RT	
3-yr OS	62%	65%	
HR	0.92 (0.8-1.06)		
p-avl	p=0.266		

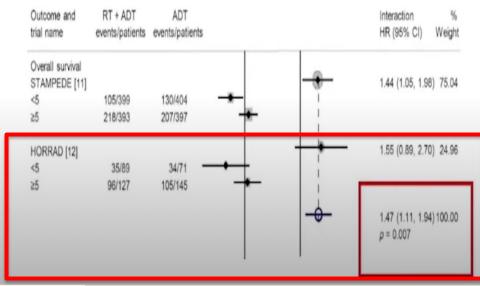
#### Significant survival benefit in low-volume patients



# 8. Role of local treatment- RT to the primary tumor in mHSPC

#### STOPCAP Metaanalysis (STAMPEDE + HORRAD): significant interaction between volume and OS

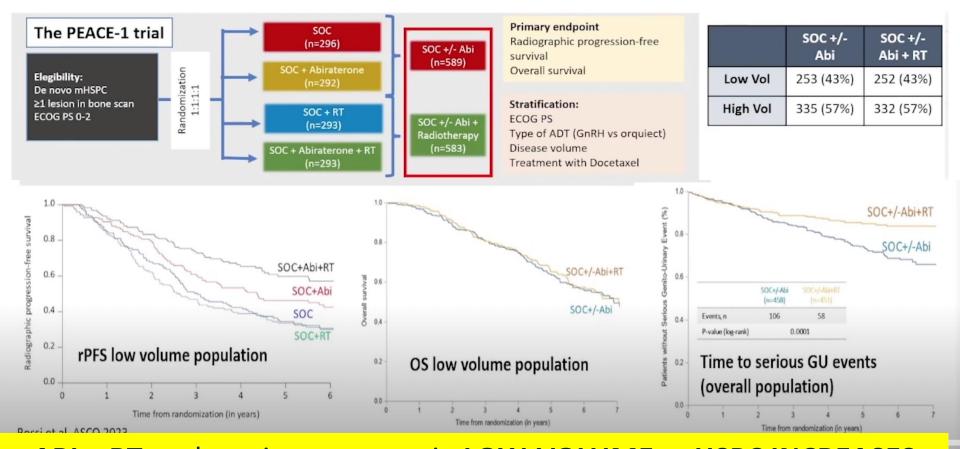




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- 9. Combination Novel hormonal agents & RT to the primary tumor in mHSP

# 9. Combination Novel hormonal agents & RT to the primary tumor in mHSPC

### **SOC+RT+ABI**



ABI + RT to the primary tumor in LOW-VOLUME mHSPC INCREASES rPFS & time to GU symptoms but there is not benefit in OS

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- 8. Role of local treatment- **RT to the primary** tumor in mHSPC
- 9. Combination **Novel hormonal agents & RT to the primary** tumor in mHSCP
- 10. Dilemmas in TREATMENT SELECTION IN mCRPC

### 10. Dilemmas in TREATMENT SELECTION IN mCRPC

- Volume of disease
- Sites of metastases
- PSMA status
- Genomic features



- Symptoms
- Performance status
- Comorbidities
- Cocurrent medications



TREATMENT mCRPC



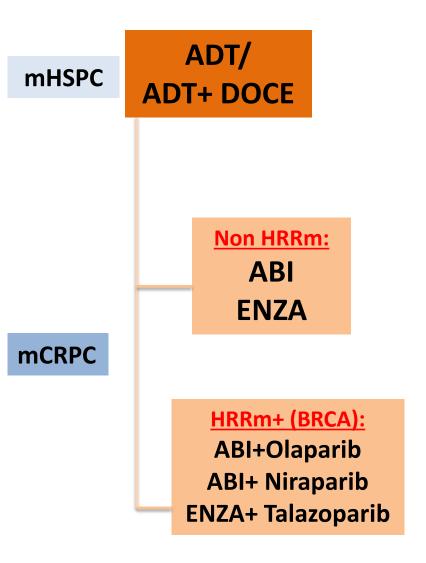
DRUG factors



PREVIOUS treatments

- Mechanisms of action
- Administration mode
- Toxicity
- Impact on QOL
- Cost

**Treatment in mHSPC** conditioned mCRPC sequence



COMBO iPARP+HORMONES IN 1st LINE mCPRC

**PROPEL** trial

**MAGNITUDE** trial

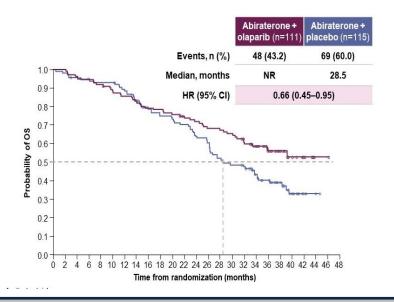
**ABIRATERONE + OLAPARIB** 

ABIRATERONE + NIRAPARIB

**TALAPRO-2** trial

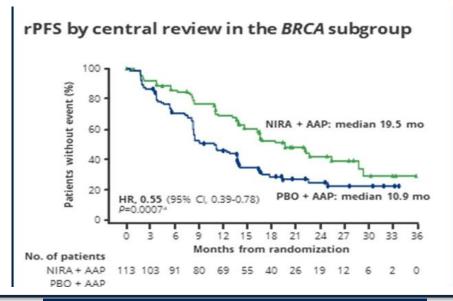
**ENZA + TALAZOPARIB** 

### PROPEL trial ABIRATERONE + OLAPARIB



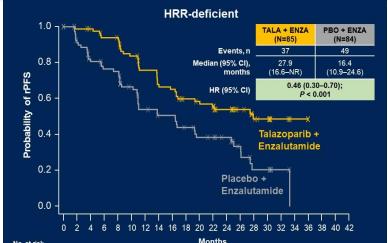
### **MAGNITUDE** trial

ABI + NIRAPARIB

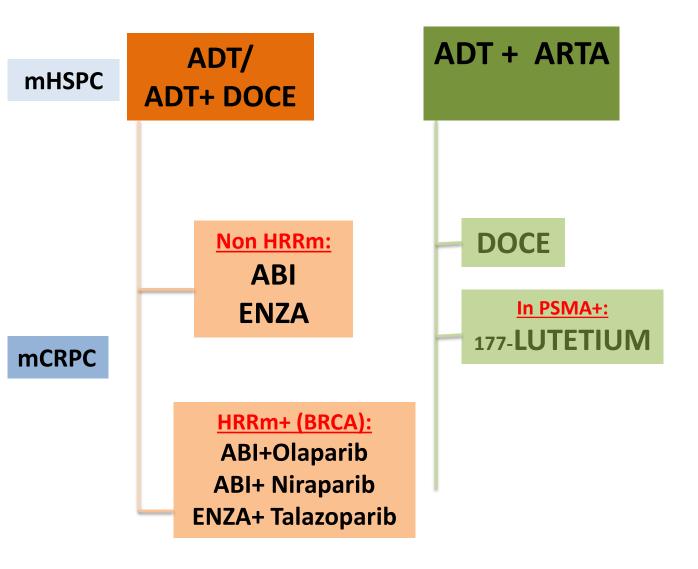


### **TALAPRO-2** trial

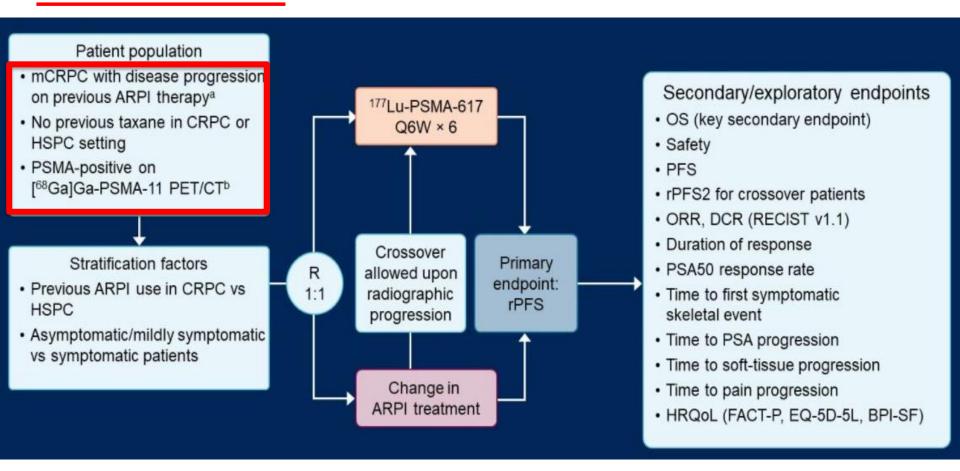
**ENZA + TALAZOPARIB** 



**Treatment in mHSPC** conditioned mCRPC sequence

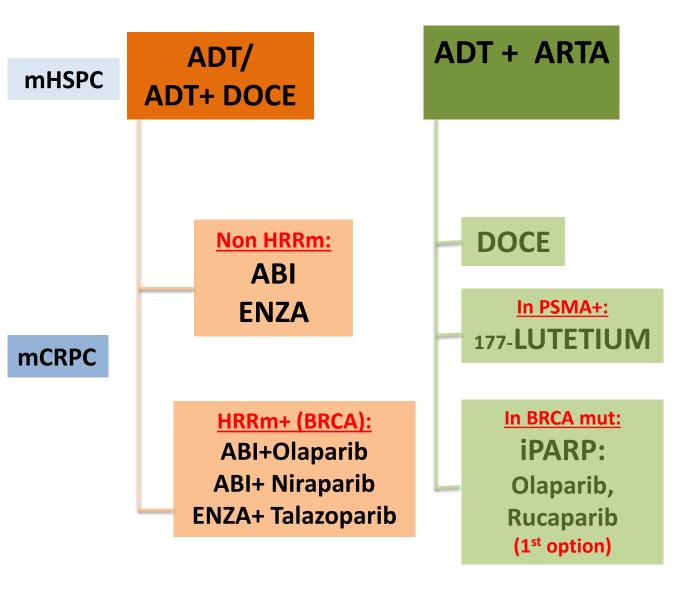


### PSMAFORE: 177LuPSMA in 1L mCRPC treated with ARPI



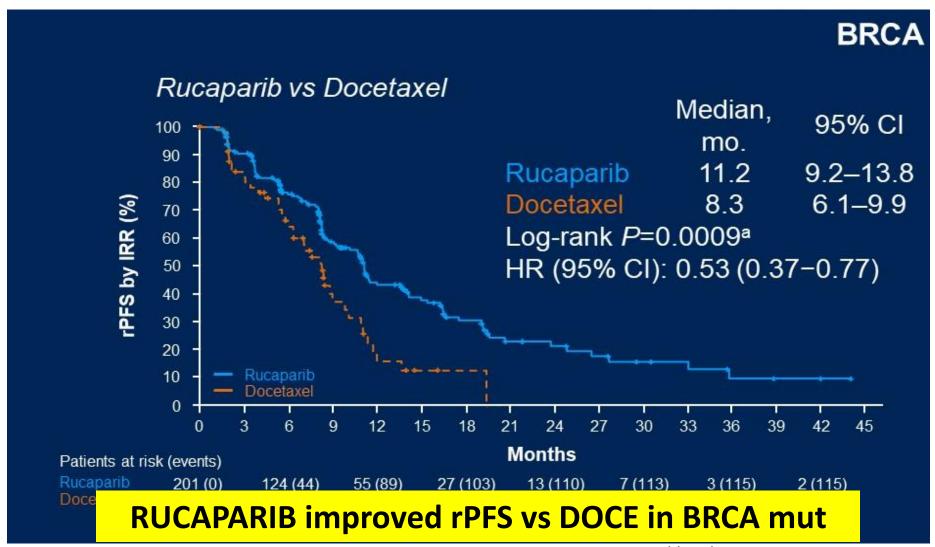
Novartis Pluvicto<sup>™</sup>'shows statistically significant and clinically meaningful radiographic progression-free survival benefit in patients with PSMA-positive metastatic castration-resistant prostate cancer

**Treatment in mHSPC** conditioned mCRPC sequence

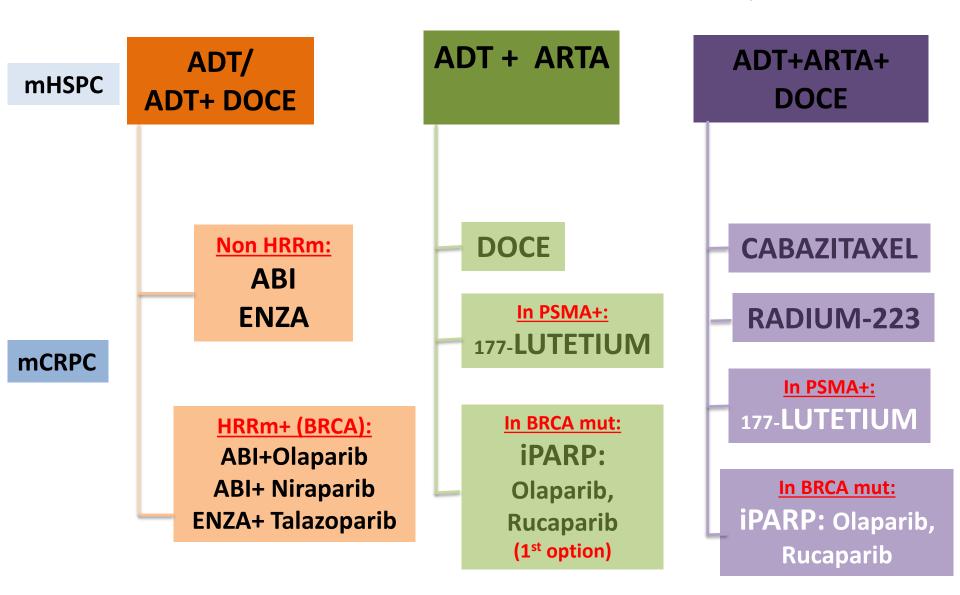


### New data at ASCO GU 2023: TRITON-3

Radiographic PFS-BRCA subgroup: Rucaparib vs DOCE



#### Treatment in mHSPC conditioned mCRPC sequence



### **CRPC FUTURE: IMMUNOTHERAPEUTIC**

#### **APPROACHES**

