

## PROSTATE CANCER Clinical Case Presentation

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### **Disclosure**

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### PROSTATE CANCER

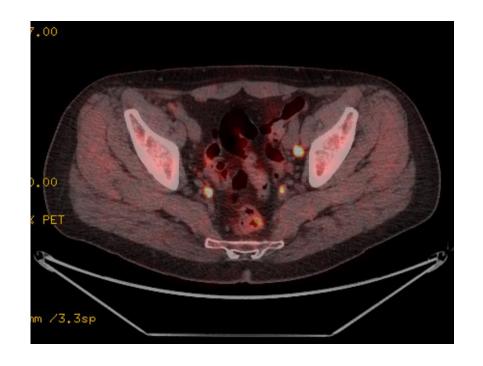
#### **Guidelines Session**

- Systemic treatment for node positive disease
- Local treatment for node positive disease
- Management of PSA failure after radiotherapy
- Treatment of low volume metastatic disease
- Bone health management on ADT



## Systemic treatment for node positive disease

- ADT alone
- ADT + docetaxel
- ADT + abiraterone
- Other



# Addition of docetaxel or bisphosphonates to standard of care in men with localised or metastatic, hormone-sensitive prostate cancer: a systematic review and meta-analyses of aggregate data

#### Effect of addition of docetaxel to standard of care on survival

	Control	Treatment		Hazard ratio (95% CI)
GETUG-12 <sup>25</sup>	49/206	42/207 —	-	0.94 (0.60–1.48)
RTOG 0521 <sup>28</sup>	59/281	43/282 ———	-	0.70 (0.47–1.04)
STAMPEDE <sup>8</sup> (SOC+/-Doc)	65/460	31/230 —		0.95 (0.62-1.46)
STAMPEDE <sup>8</sup> (SOC+ZA+/-Doc)	31/227	20/228 —	<del>      -</del>	1.05 (0.57–1.95)
Overall				0.87 (0.69-1.09)
Heterogeneity: $\chi^2=1.80$ ; df=3; p=0.614; $I^2=0\%$		0.5	1	2
		←	<b>-</b> →	
		Favours SOC + o	docetaxel Favours SO	C



## Abiraterone for prostate cancer not previously treated with hormone therapy

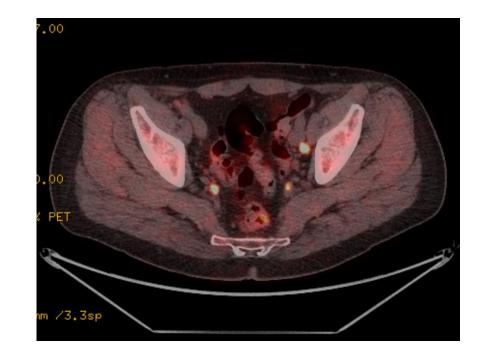
B Failure-free Survival Subgroup	ADT Alone	Combination Therapy events/no. of pa	(95% CI)	P Value for Interaction
Metastatic status	,			0.08
Nonmetastatic	142/455	38/460	0.21 (0.15–0.31)	
Metastatic	393/502	210/500	0.31 (0.26–0.37)	

A Overall Survival Subgroup	ADT Alone no. of deaths/n		Hazard Ratio with Combination Therapy (95% CI)	P Value for Interaction
Metastatic status				0.37
Nonmetastatic	44/455	34/460	0.75 (0.48–1.18)	
Metastatic	218/502	150/500	0.61 (0.49–0.75)	



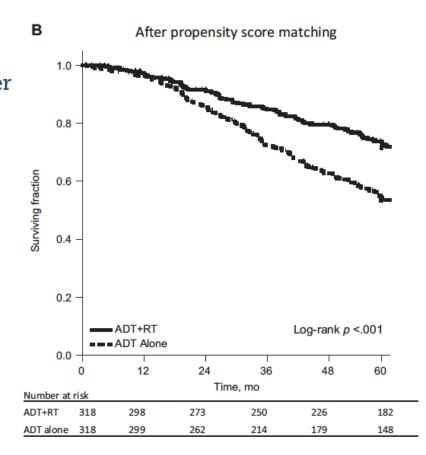
No local treatment

- Surgery
- Radiotherapy
- Other





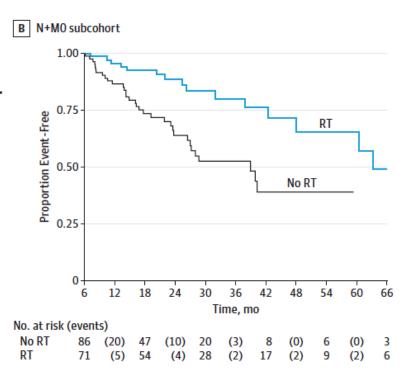
Androgen Deprivation With or Without Radiation
Therapy for Clinically Node-Positive Prostate Cancer
Chun Chieh Lin\*, Phillip J. Gray\*, Ahmedin Jemal, Jason A. Efstathiou
JNCI J Natl Cancer Inst, 2015, Vol. 107, No. 7





Failure-Free Survival and Radiotherapy in Patients With Newly Diagnosed Nonmetastatic Prostate Cancer for the STAMPEDE Investigators

JAMA Oncology March 2016 Volume 2, Number 3





- Radiotherapy improves survival in N0 M0 disease (MRC PR07, SPCG7)
- If radiotherapy also improves survival in N0/1 M1 disease (HORRAD, STAMPEDE)....
- then it would be safe to conclude that radiotherapy also improves survival in N1 M0 disease



## Management of PSA failure

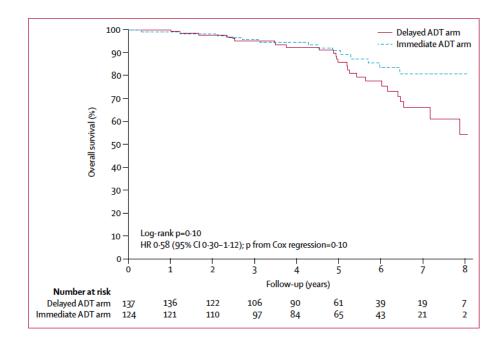
- Early ADT above PSA threshold (e.g. PSA > 10 ng/mL)
- Early ADT below PSA doubling time threshold (e.g. < 4 months)</li>
- Observation until site of recurrence identified on imaging
- Other



Timing of androgen-deprivation therapy in patients with prostate cancer with a rising PSA (TROG 03.06 and VCOG PR 01-03 [TOAD]): a randomised, multicentre, non-blinded, phase 3 trial

Gillian M Duchesne, Henry H Woo, Julie K Bassett, Steven J Bowe, Catherine D'Este, Mark Frydenberg, Madeleine King, Leo Ledwich, Andrew Loblaw, Shawn Malone, Jeremy Millar, Roger Milne, Rosemary G Smith, Nigel Spry, Martin Stockler, Rodney A Syme\*, Keen Hun Tai, Sandra Turner

Lancet Oncol 2016; 17: 727-37





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	Delayed ADT	Immediate ADT
Prostate Ca deaths	12	6
Other deaths	14	8
Total deaths	26	14



## Timing of ADT after radiation: planned analysis of two RCTs

- 339 patients, median 5 year follow up
- Immediate versus delayed ADT
- Overall survival HR 0.75, 95% CI: 0.4-1.4; p=0.37



### **ESMO** Guidelines – PSA failure

Early ADT is **not routinely recommended** for men with biochemical relapse unless they have symptomatic local disease, or proven metastases, or a PSA doubling time < 3 months



### Treatment of low volume metastatic disease

ADT alone

ADT + docetaxel

ADT + abiraterone

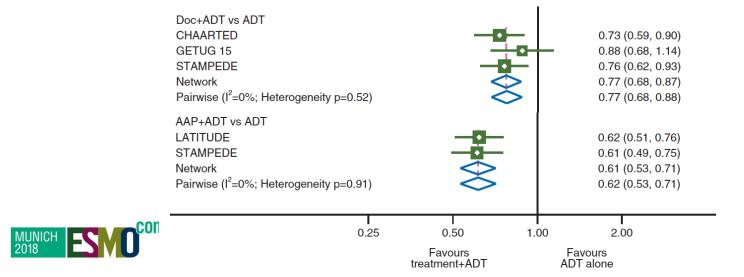
Other



What is the optimal systemic treatment of men with metastatic, hormone-naive prostate cancer? A STOPCAP systematic review and network meta-analysis

C. L. Vale<sup>1\*†</sup>, D. J. Fisher<sup>1†</sup>, I. R. White<sup>1</sup>, J. R. Carpenter<sup>1</sup>, S. Burdett<sup>1</sup>, N. W. Clarke<sup>2</sup>, K. Fizazi<sup>3</sup>, G. Gravis<sup>4</sup>, N. D. James<sup>5,6</sup>, M. D. Mason<sup>7</sup>, M. K. B. Parmar<sup>1</sup>, L. H. Rydzewska<sup>1</sup>, C. J. Sweeney<sup>8</sup>, M. R. Spears<sup>1</sup>, M. R. Svdes<sup>1</sup> & J. F. Tiernev<sup>1</sup>

Annals of Oncology 29: 1249-1257, 2018



## Credibility of claims of subgroup effects in RCTs: systematic review

- Was the subgroup variable a baseline characteristic?
- Was the subgroup variable a stratification factor?
- Was the subgroup hypothesis specified a priori?
- Was the analysis one of a small number of subgroups tested?
- Was the test of interaction significant?
- Was the significant interaction effect independent?
- Was the direction of the subgroup effect correctly pre-specified?
- Was the effect consistent with previous studies?
- Was the effect consistent across related outcomes?
- Indirect supportive evidence e.g. biological rationale?



### **ESMO** Guidelines – Metastatic disease

ADT plus docetaxel may be considered as first-line treatment for metastatic, hormone-naive disease

## **Bone health management**

- Monthly zoledronate/denosumab
- 6-12 monthly zoledronate/denosumab
- Oral bisphosphonates (eg alendronate 70 mg weekly)
- None unless bone density scan shows osteopenia/osteoporosis



# Addition of docetaxel or bisphosphonates to standard of care in men with localised or metastatic, hormone-sensitive prostate cancer: a systematic review and meta-analyses of aggregate data

### Effect of addition of bisphosphonates to standard of care on survival

	Control	Treatment		Hazard ratio (95% CI)
CALGB 90202 <sup>30</sup>	151/322	134/323		0.88 (0.70–1.11)
STAMPEDE <sup>8</sup> (SOC+/–ZA)	350/724	170/366	<del>-  - </del> -	0.93 (0.78-1.12)
STAMPEDE <sup>8</sup> (SOC + Doc +/-ZA)	144/362	158/365	<del>-   -</del>	1.04 (0.79–1.37)
Overall			-	0.94 (0.83-1.07)
Heterogeneity: $\chi^2 = 0.84$ ; df=2; p=0	)·656; I <sup>2</sup> =0%		i	
		0.5	_ 1	2
	Fa	vours SOC+zoled	ronic acid Favours S	OC



### **ESMO** Guidelines – Bone health

Men on long-term ADT should be **monitored for side-effects** including **osteoporosis (using bone densitometry)** 

### National osteoporosis guideline group (2017)

www.shef.ac.uk/NOGG

- Assess fracture risk (FRAX)
- Lifestyle measures
  - Regular weight-bearing exercise
  - 800 IU cholecalciferal + 700-1200mg calcium intake daily
- Intervention threshold based on risk of major fracture (FRAX)
- Alendronate/risedronate are first line treatments



#### **Prostate cancer**

#### **Guidelines Session**

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