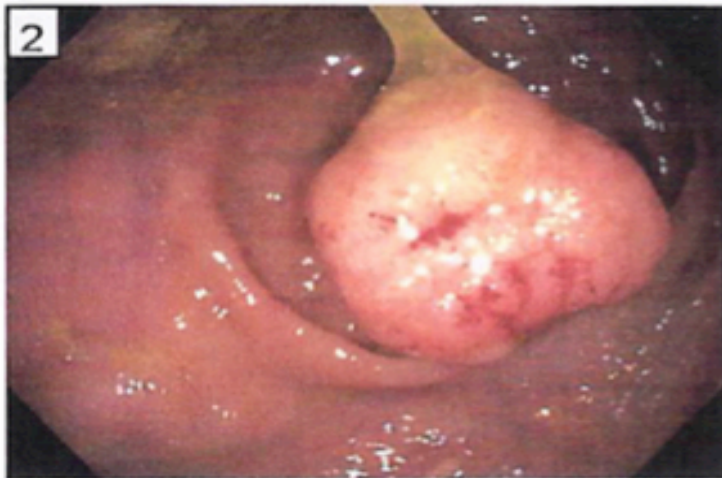


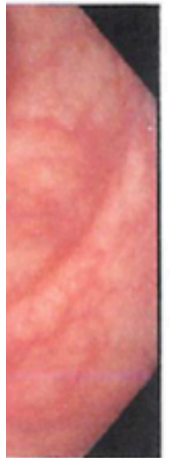
# Rectal Polyps



polyp in the rectum

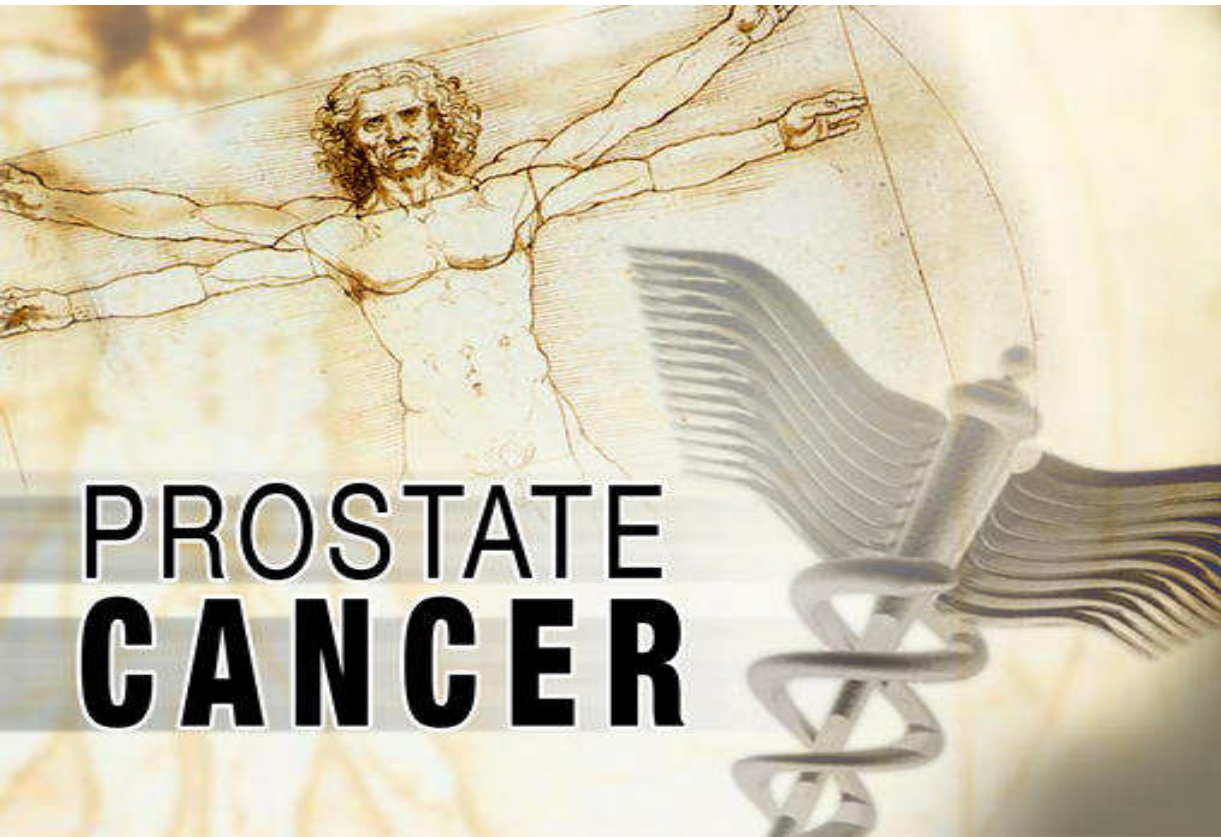


polyp in the sigmoid colon



# Androgen annihilation as a new therapeutic paradigm in advanced prostate cancer

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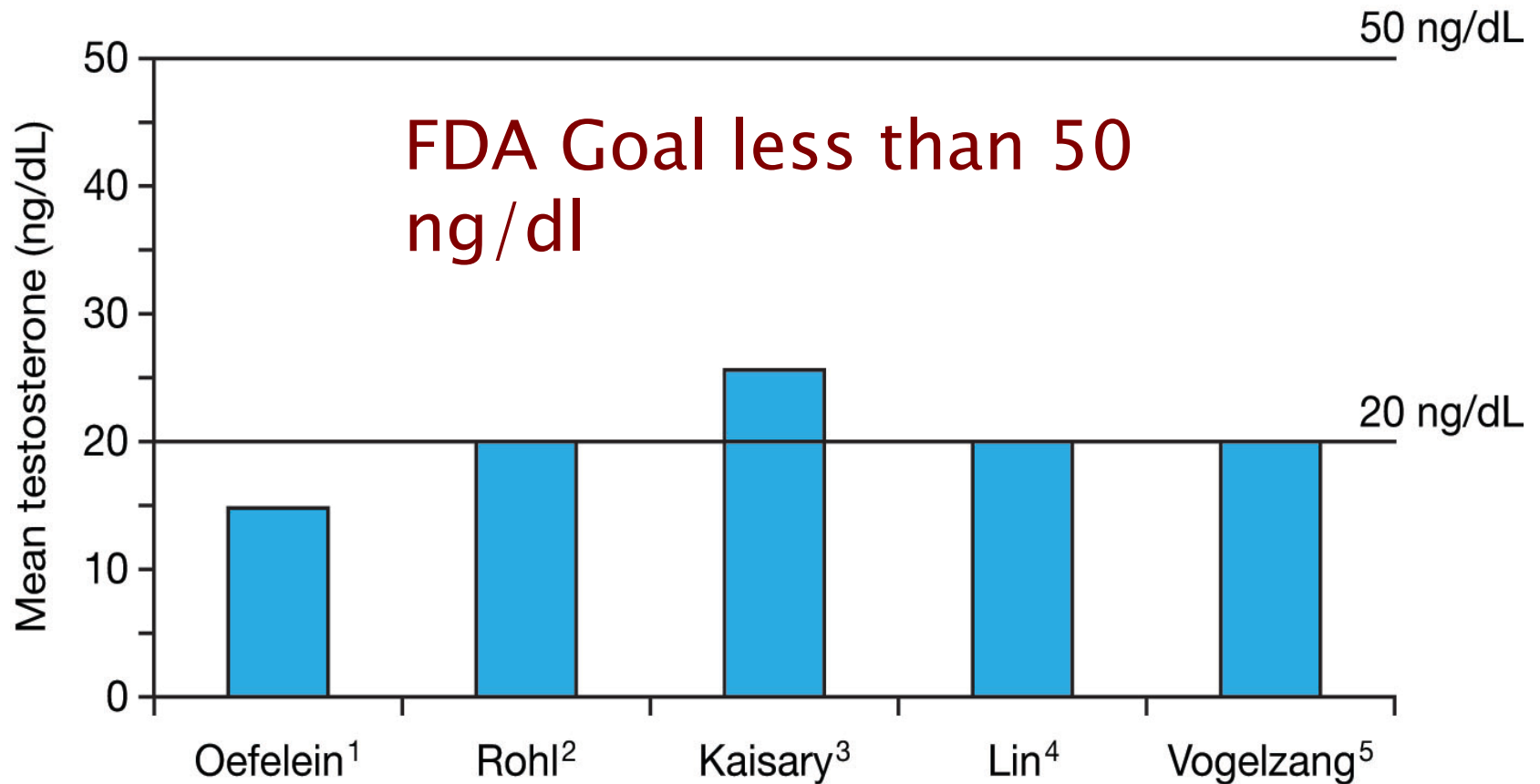
E. David Crawford,  
M.D.



Professor of  
Surgery/Urology/  
Radiation  
Oncology  
University of  
Colorado

# Testosterone levels after orchiectomy

I believe the goal is < 20ng/dl

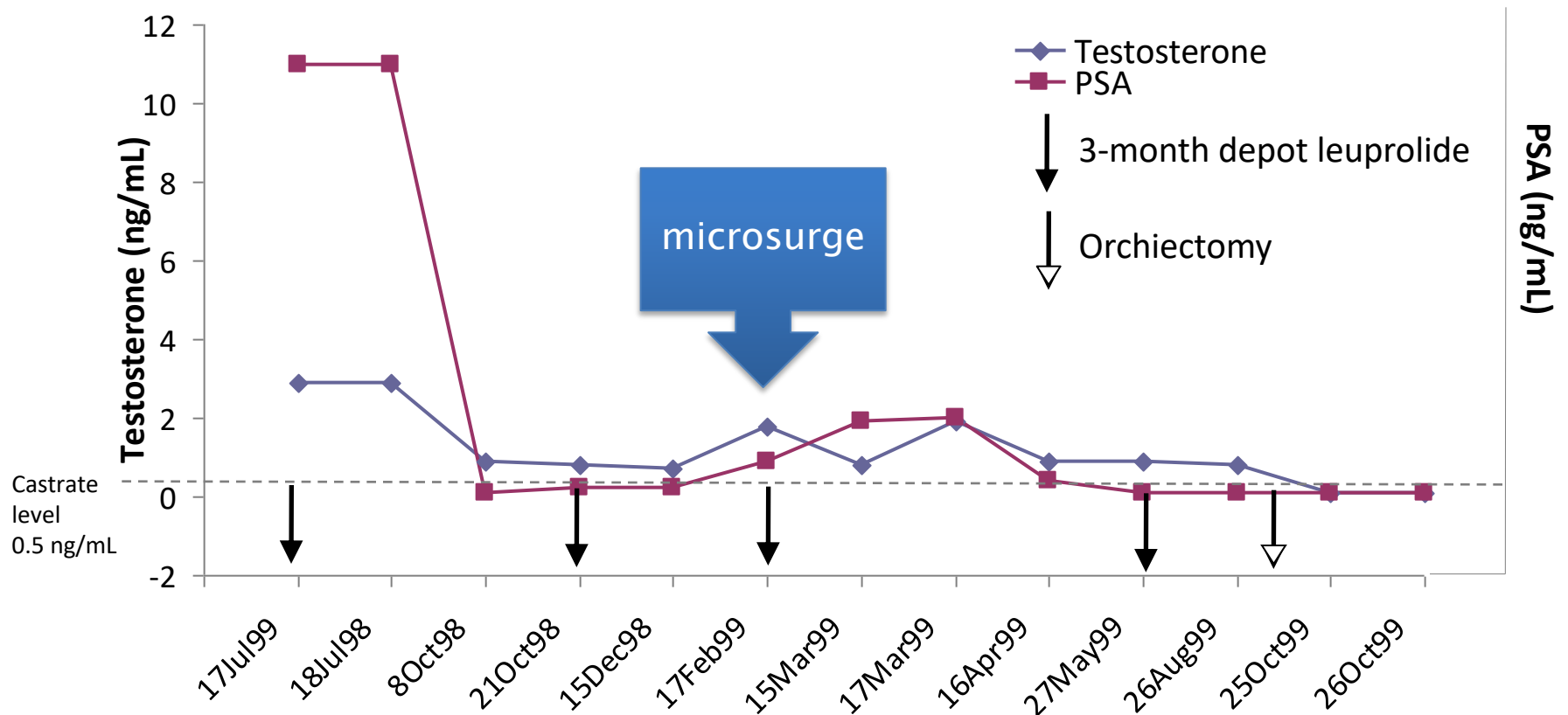


1. Oefelein MG et al. *Urology* 2000;56:1021-4
2. Røhl HF, Beuke HP. *Scand J Urol Nephrol* 1992;26:11-43
3. Kaisary AV et al. *Br J Urol* 1991;67:502-8
4. Lin BJ et al. *Urology* 1994;43:834-7
5. Vogelzang NJ et al. *Urology* 1995;46:220-6

Figure taken from:  
Tombal B, Berges R. *Eur Urol Suppl* 2005;4:30-6

# Leuprolide injection history in a patient with high BMI

Age 63 years; BMI 36.1 kg/m<sup>2</sup>; PSA 10.8 ng/mL; Gleason score 4+3



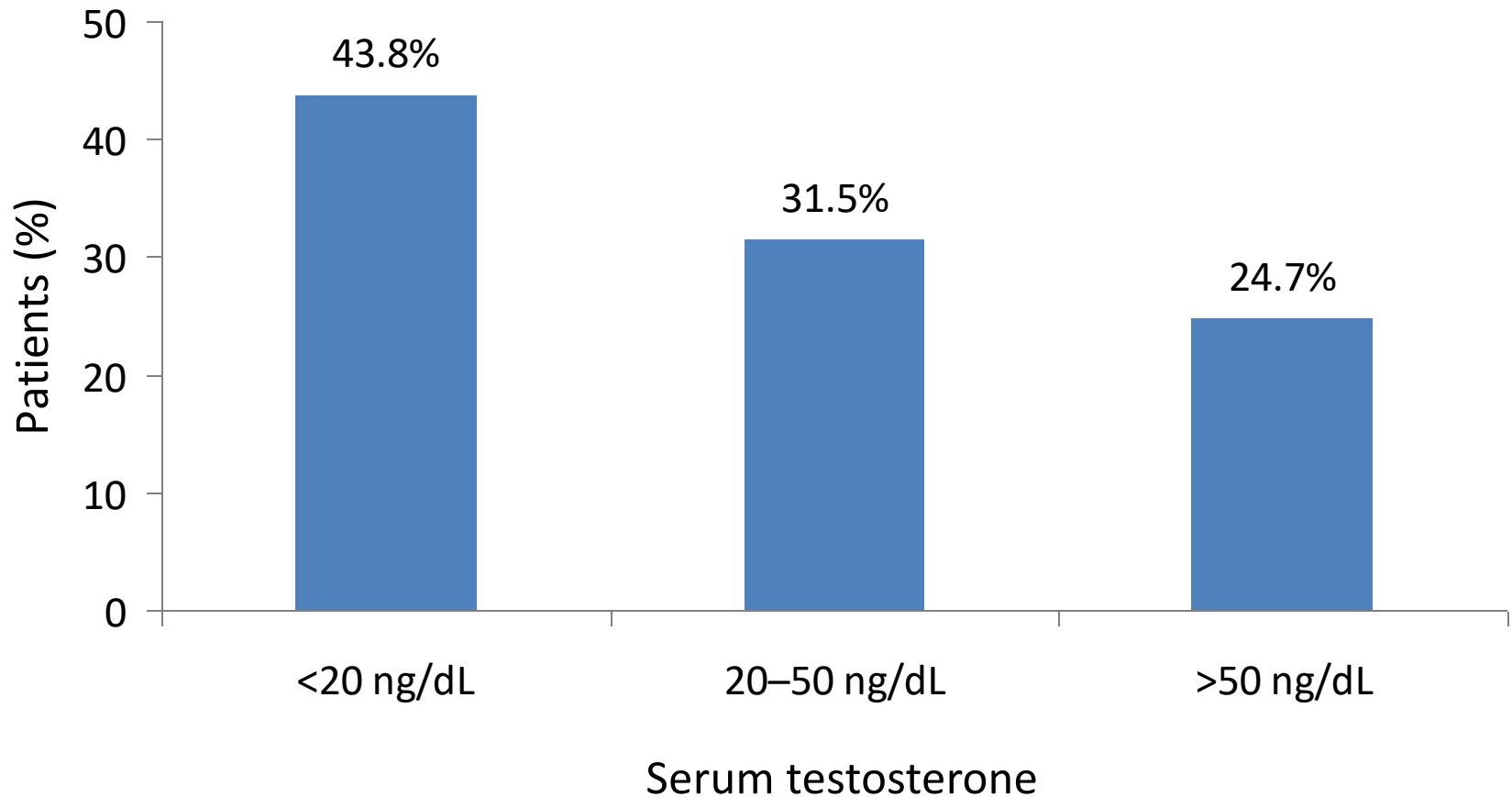
# Mounting Evidence Supporting a New Castration Definition of $<20$ ng/dL

2007 2008 2009 2010 2011 2012 2013 2014 2015

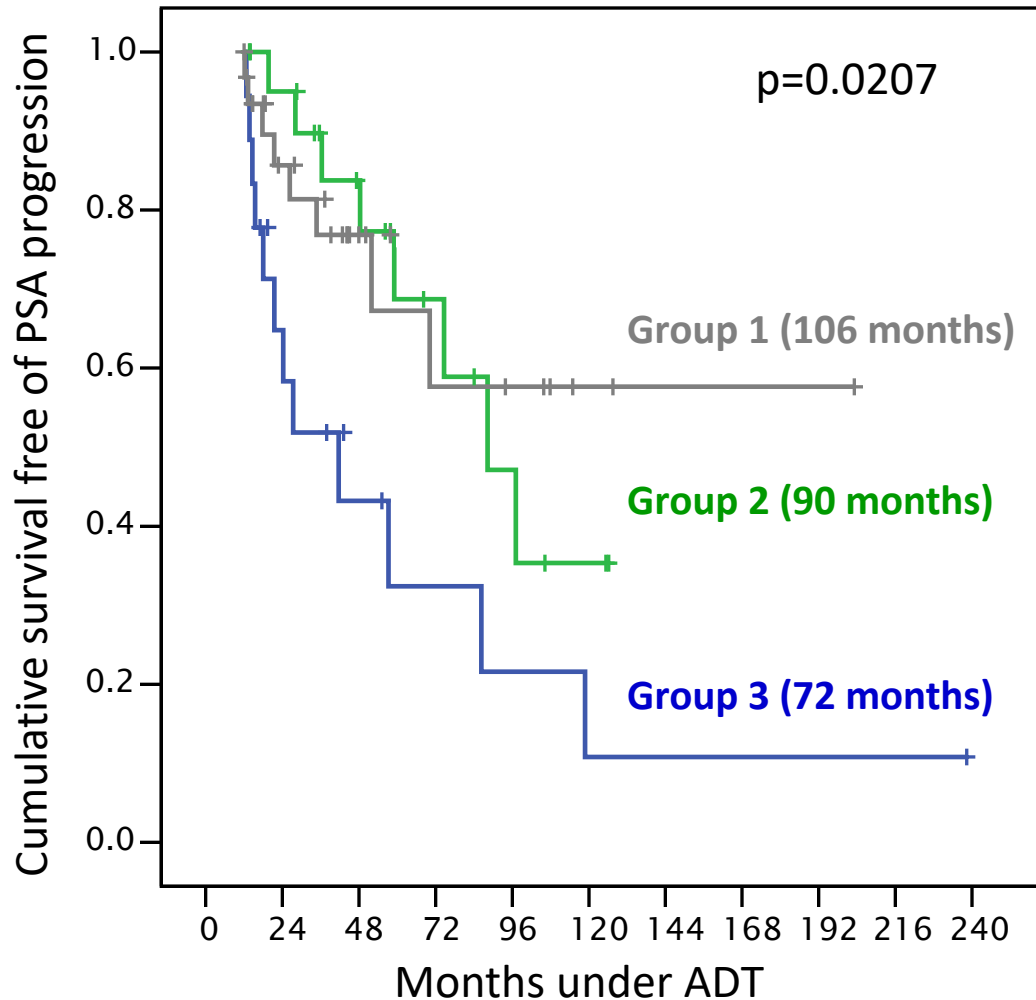
Klotz et al. Pending Publication

**J**OURNAL OF  
**C**LINICAL  
**O**NCOLOGY

# Testosterone escapes occur frequently during LHRH agonist therapy



# Survival free of AIP according to serum testosterone behaviour



## Testosterone increases

Group 1: <20 ng/dL

Group 2: 20-50 ng/dL

Group 3: >50 ng/dL

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# Another Point of Failure

**E. David Crawford, MD<sup>‡</sup> and Kyle O. Rove, MD**

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[david.crawford@ucdenver.edu](mailto:david.crawford@ucdenver.edu)

Crawford and Rove, N Engl J Med  
363:1976, 2010.

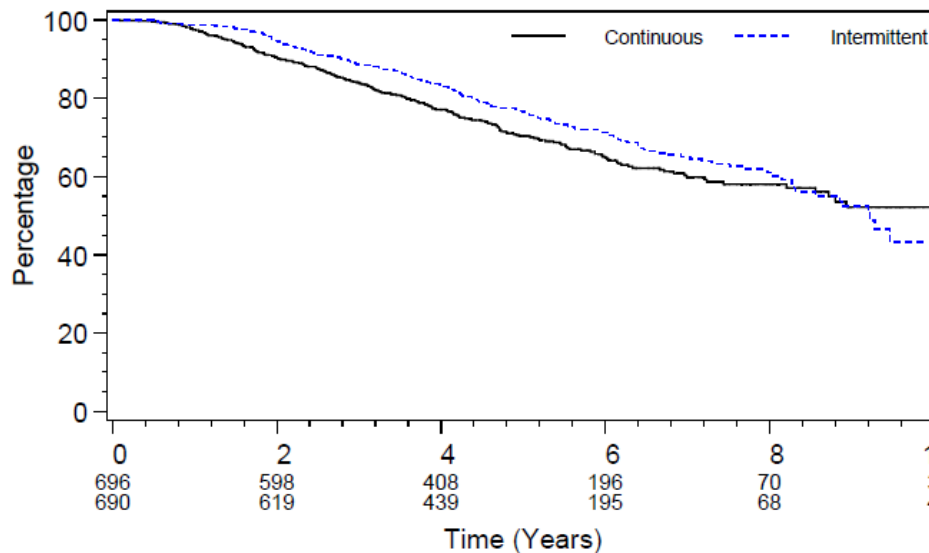


# NCIC PR.7 - CAS vs IAS in post-RT failures

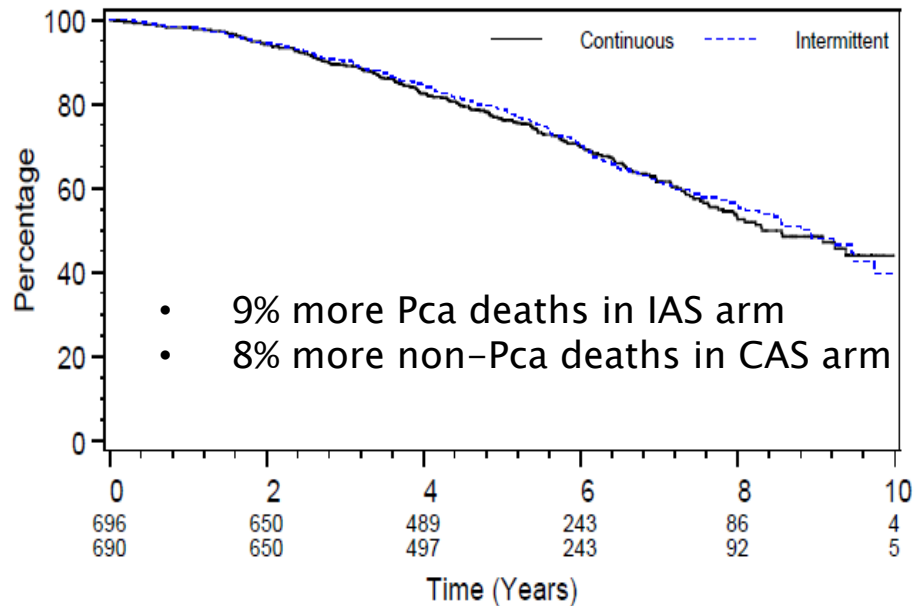
## Intermittent Androgen Suppression for Rising PSA Level after Radiotherapy

Juanita M. Crook, M.D., Christopher J. O'Callaghan, D.V.M., Ph.D., Graeme Duncan, M.D., David P. Dearnaley, M.D., Celestia S. Higano, M.D., Eric M. Horwitz, M.D., Eliot Frymire, M.A., Shawn Malone, M.D., Joseph Chin, M.D., Abdenour Nabid, M.D., Padraig Warde, M.B., Thomas Corbett, M.D., Steve Angyalfi, M.D., S. Larry Goldenberg, M.D., Mary K. Gospodarowicz, M.D., Fred Saad, M.D., John P. Logue, M.R.C.P., Emma Hall, Ph.D., Paul F. Schellhammer, M.D., Keyue Ding, Ph.D., and Laurence Klotz, M.D.

Time to hormone resistance (ITT)

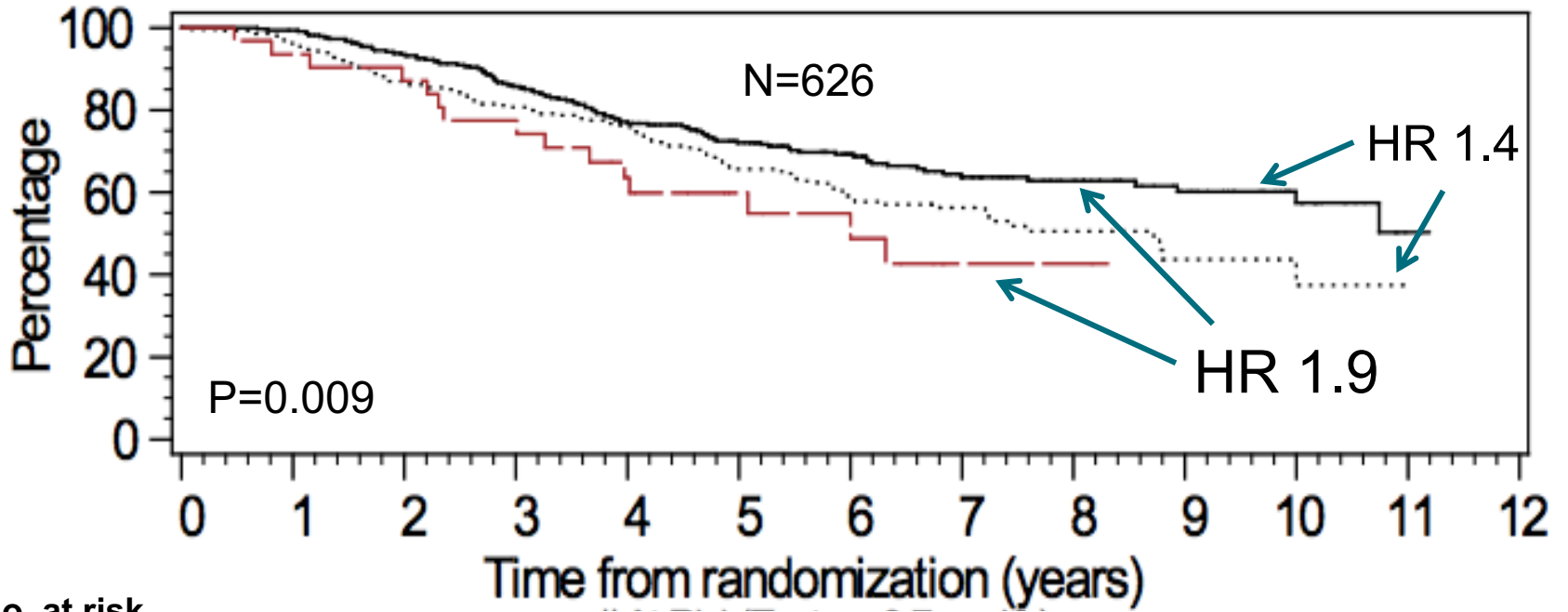


Overall survival (ITT)



- 1300 patients, Median F/U 6.5 years
- Time to progression favours IAS (HR 0.83, p=0.06) but trial design may bias IAS arm
- Overall survival with IAS non-inferior to CAS
- 27% of time was spent on therapy

# PR7 and survival based on T levels



No. at risk

<20	330	326	298	256	218	174	128	87	63	42	21	4	0
20-50	265	252	223	204	184	135	92	56	31	19	6	1	0
>50	31	29	27	24	17	12	9	2	2	0	0	0	0

# Comparison Chart of 6 Studies

Primary Author	Year	# of Patients	Retrospective/ Prospective	Delay Disease	Improve Survival	Castration Threshold	Hazard Ratio For Death*
Morote	2007	73	Retrospective	✓	✓	<20	2.8
Perachino	2008	162	Retrospective		✓	<20	1.92
Perachino	2010	129	Retrospective		✓	n/a	1.32
Dason	2013	32	Prospective	✓		<32	n/a
Bertaglia	2013	153	Prospective	✓	✓	<30	0.45**
Klotz	2015	626	Prospective		✓	<20	2.8

\* HR for death in patients above castration threshold

\*\*HR for death in patients below castration threshold

# Guidelines on Testosterone Castration Levels



**Guidelines Inconsistent Regarding Testosterone Suppression Goal**

Unless you are the lead dog, the scenery is always the same





# Unless you are directing the dogs



# Time to hang it up

