

When do I NOT do a radical prostatectomy for prostate cancer?

Rainy Umbas

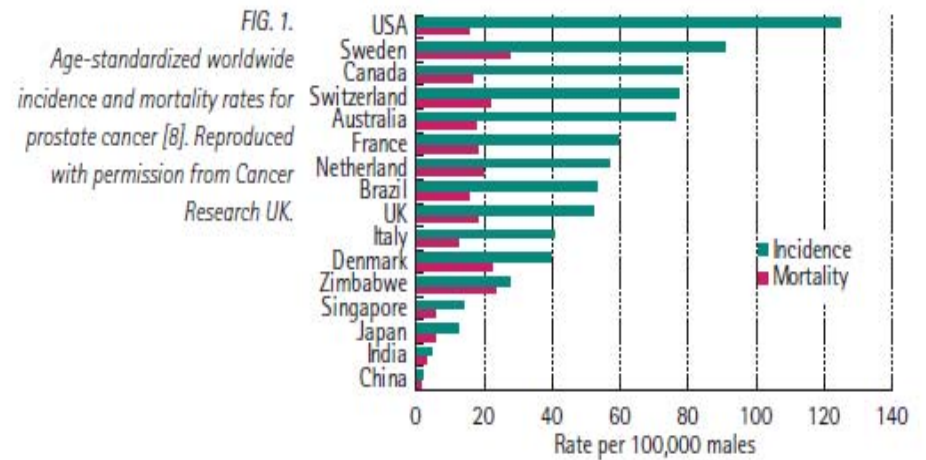
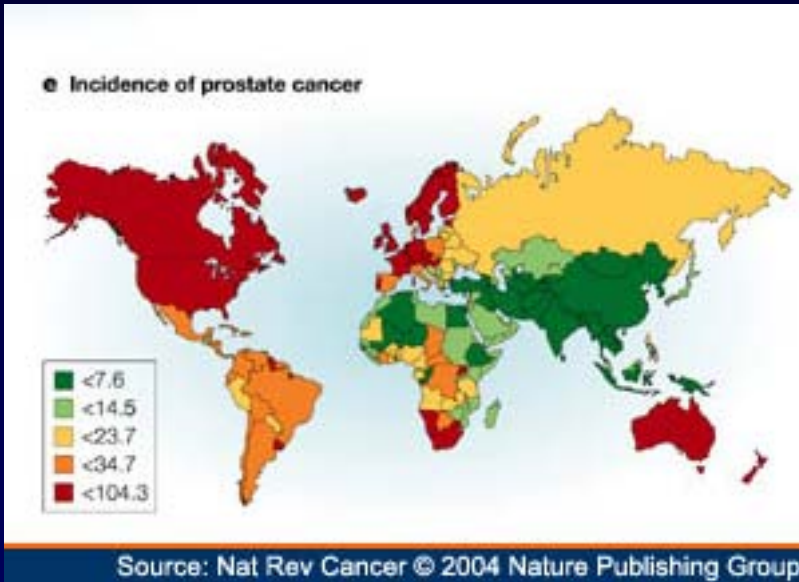
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Prostate Cancer in Asia



Changing demography of prostate cancer in Asia

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Age-adjusted Incidence Rate of PCa : % change 1978 – 1982 vs 1993 - 1997

The Philippines, Rizal	49.5
Singapore, Chinese	118.2
Japan, Miyagi	110.4
China, Hong Kong	38.7
India, Mumbai	10.8
Thailand, Chiang Mai	5.0
China, Shanghai	66.7



Early stage Prostate Cancer

- T1 & 2 represent approximately 80% of all newly diagnosed prostate cancer in western world, and some of Asian countries, especially in places with active screening program
- Percentage of T1c increased significantly from 1990/1994-2004/2006 (CaPSURE):

29.9% \longrightarrow 78.3% (Cooperberg MR et al, J Urol 2007)

- T1c and T2a: 35% vs 83% (before & after 1995)
(Bianco FJ Jr et al, Urology 2005)



Early stage Prostate Cancer

Treatment option for organ confined prostate cancer:

- Active surveillance / Watchful Waiting (WW)
- Radical prostatectomy
- Radiotherapy (EBRT or Brachytherapy)
- Primary Androgen deprivation therapy (PADT)

Depend on:

risk stratification, co-morbidity, performance status, & patient preference



Early stage Prostate Cancer

Aim of treatment:

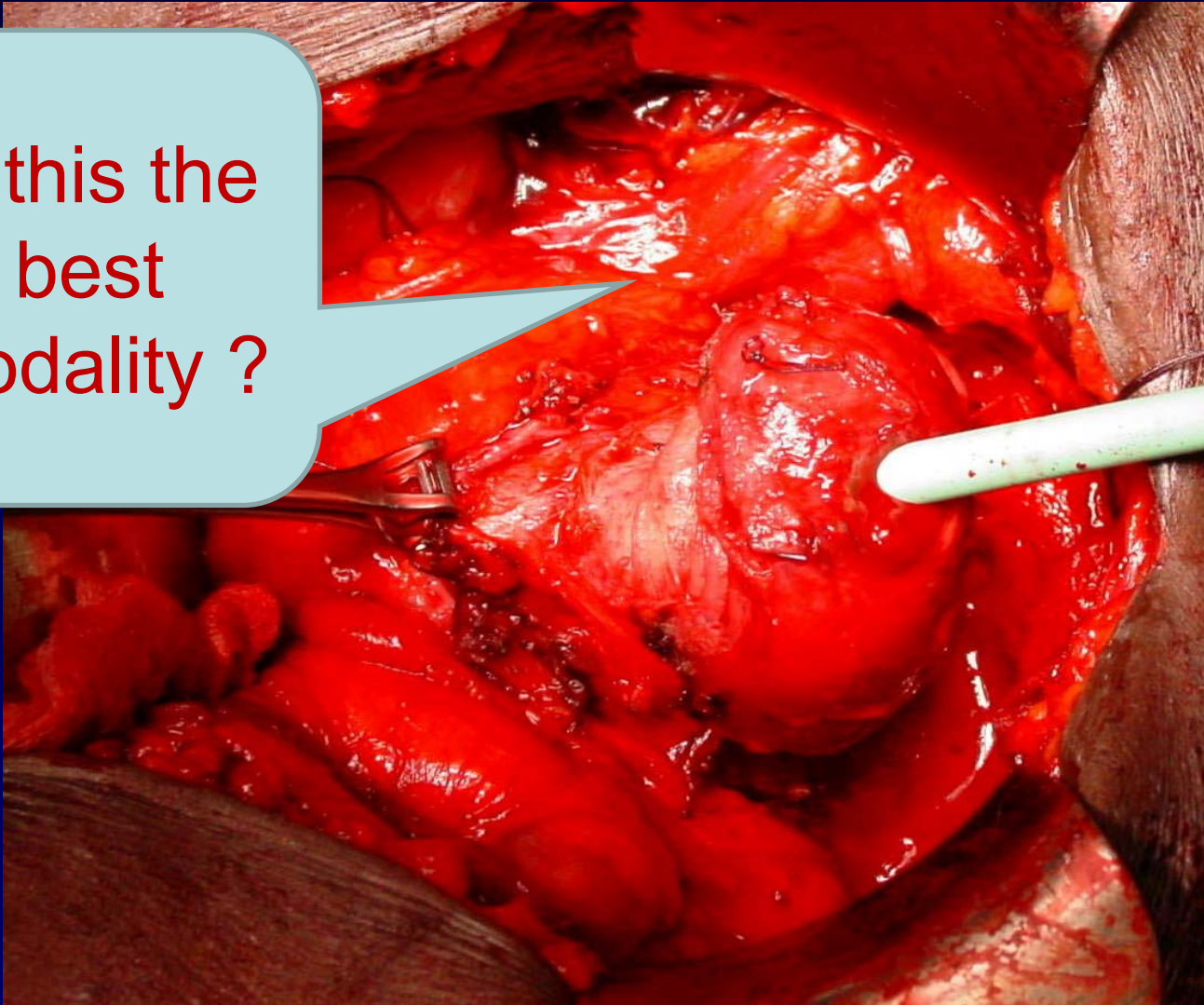
- Cancer Control
- Maintaining urinary control (continence)
- Recovery of sexual function (potency)

“ TRIFECTA “



Radical Prostatectomy

Is this the
best
modality ?



Radical Retropubic Prostatectomy:

Abstracts in 2007				Abstracts in 2009			
Author	Country	Cases / year	Total	Author	Country	Cases / year	Total
Simforoosh N # 419	Iran	18	88	Gao X & Sun Y, SIU 2009	China (Shanghai)	30	167
Tomita K # 632	Japan	20	447	Simforoosh N et al, SIU 2009	Iran (Tehran)	24	188
Jeong SJ # 1034	S. Korea	107	267	Miyaji J et al, SIU 2009	Japan (Iwakuni & Kurashiki)	45	267
				Taguchi K et al, SIU 2009	Japan (Yatomi)	48	242
				Fujii Y et al, AUA 2009	Japan (Tokyo)	96	578

(Eur Urol, suppl 2007; Urology 2009; J Urol 2009)



Radical prostatectomy: Long term results

Cancer specific survival (CSS):

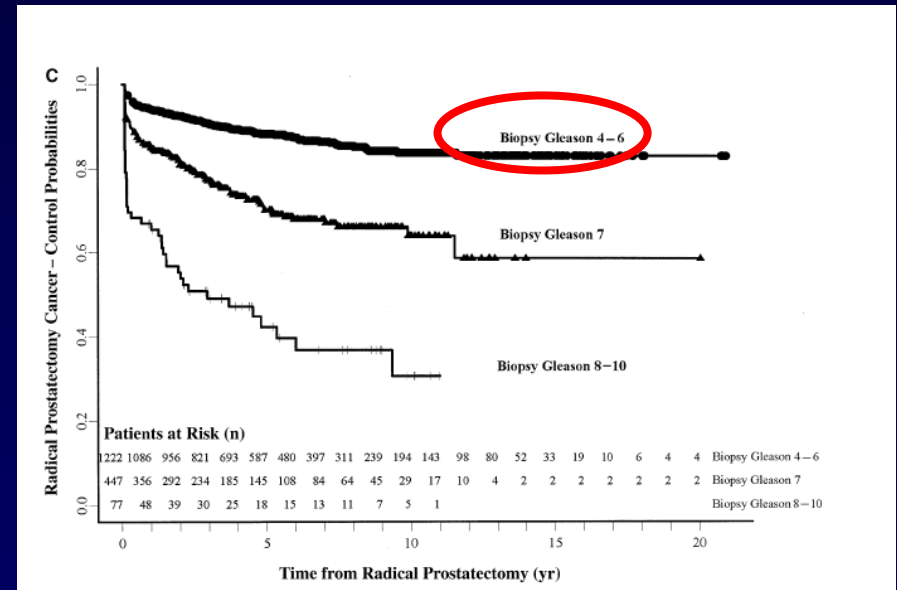
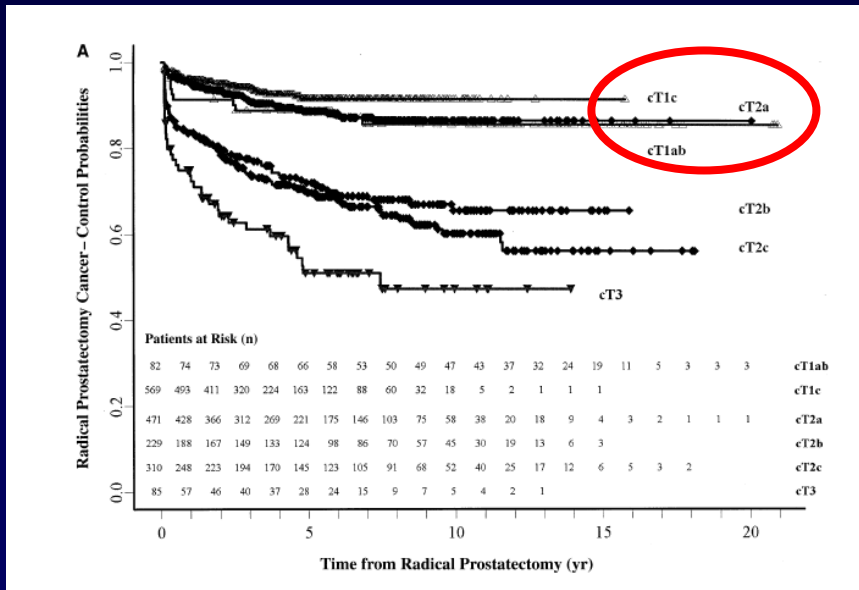
n	Age group	Risk group	10 years CSS
5509	< 55 years	Low	99%
		Medium	96%
		High	91%
	> 70 years	Low	99%
		Medium	97%
		High	94%

(Siddiqui SA et al, J Urol 2006)



Radical prostatectomy: Long term results

Cancer specific survival (CSS): stage & GS



(Bianco FJ Jr et al, Urology 2005)



Radical prostatectomy: Adverse events

Short term:

- Peri-operative morbidity : 1.7-28.6%
- Peri-operative mortality : 0.01-0.5%

(Rabbani F, 2010; Mitchell RE, 2009; Chin JL, 2010)

Long term:

- Urinary leakage (incontinence) : 7-35%
- Erectile dysfunction : 23-42%
- Bowel urgency : 1%

(Wilt TJ, 2008; Loughlin KR, 2010; Tal R, 2009)



Prostate cancer in Asia:

There are not so many Asian publication concerning the use of Radiotherapy although a more sophisticated facility such as Intensity-modulated radiation therapy (IMRT) machines are available in many Asian countries

Author	Country	Study period	Cases/year	Total
Lertbutsayanukul C et al, 2008 ¹	Thailand (Bangkok)	2005-2007	14	27
Koh WY et al, 2009 ²	Singapore	2005-2008	25	76

1. J Med Assoc Thai 2008.
2. Int J Radiation Oncology Biol Phys 2009



Role of EBRT in early stage Prostate Cancer

- As primary treatment in pts with life expectancy between 5-10 years or ≥ 10 years with comorbidity
- 5-years recurrence free survival : 79-91%
- 5-years survival: 62-88% depend on dose, fractionation, technique, and adjuvant ADT

Adverse events:

- Bowel dysfunction : 9-26%
- Urinary tract dysfunction : 24-28%
- Erectile dysfunction : 43%

(Michalski JM, 2010; Wilt TJ, 2008)



PADT in early stage Prostate Cancer

As primary treatment:

- Advanced age
- Patient refusing curative treatment
- Patient unsuitable for curative treatment due to co-morbidity

(Bartsch G et al, 6th International Consultation on new developments in prostate cancer and prostate disease 2006)

- Could be given immediately or deferred
- Continuous or intermittent



Role of PADT in early stage Prostate Cancer

Management of localized prostate cancer (by order of preference)

(Bartsch G et al, 6th International Conference on Prostate Cancer and Prostate Cancer Research)

As first preference

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w developments in

Risk	Life expectancy		
	< 5 years	5-10 years	> 10 years
High: • T2b, 3a, 3b or • GS $\geq 4+3 = 7$ or • PSA 10-20 or • Biopsy findings >50%, perineural, ductal	1. Hormonal Tx 2. RT + HT 3. Investigational therapy	1. RT + HT 2. Hormonal Tx 3. RP 4. Investigational therapy	1. RT + HT 2. RP 3. Investigational therapy 4. Hormonal Tx



The androgen deprivation syndrome

What patients expect

- Loss of libido
- Erectile impotence
- Decreased energy

What they also get

- Metabolic syndrome
- Osteoporosis / fracture
- Loss of muscle mass
- Weight gain
- Anaemia
- Alteration in lipid profile
- Depression, personality change



Role of PADT in early stage Prostate Cancer

As primary treatment:

- non-statistically significant benefit in localized PCa pts with poorly differentiated tumor
- No benefit and possibly greater mortality in well- or moderately differentiated stage 2 disease

(Lu-Yao GL et al, JAMA 2008)

(Wong Y-N et al, Eur Urol 2009)



Comparative across primary treatment in early stage prostate cancer

Modalities	Benefit	Harm
RP vs WW	RP reduced cancer specific mortality by 5%	Incontinence & sexual dysfunction were greater in RP
RP vs EBRT	RP was effective in preventing progression in 5 years	Incontinence more common in RP Bowel dysfunction more common in EBRT SD was similar

(Wilt TJ et al, Ann Intern Med 2008)



Prostate Cancer Treatment: More negative effects on QoL in the first 6 months after operation

More negative effects on QoL in the first 6 months after operation

Table 5. Quality-of-Life in Primary Prostate Cancer Treatment^a

Prevalence of Moderate to Severe Problems in Specific Health-Related Quality-of-Life Domains, %^a

Primary Treatment	Urinary Incontinence	Urinary Irritation or Obstruction	Bowel or Rectal	Sexual
Early: 2 to 6 months after primary treatment				
Prostatectomy	15-50	5-15	1-5	>50
External radiation	1-5	15-50	5-15	15-50
Brachytherapy	5-15	15-50	5-15	15-50
Late: 24 months after primary treatment				
Prostatectomy	5-15	1-5 ^b	<1	15-50
External radiation	1-5	1-5 ^b	5-15	15-50
Brachytherapy	5-15	5-15	5-15	15-50

^aBased on Sanda et al.²⁷

^bFive percent to 15% of patients reported improvement in obstructive urinary symptoms after prostatectomy, 1% to 5% after external radiation.



Why Do Men Choose One Treatment over Another?

A Review of Patient Decision Making for Localized Prostate Cancer

Patients considerations:

- Cancer control
- Side effects

Doctor's considerations:

- Cancer control
- Risk factors
- Comorbidity
- Patient's performance

(Zeliadt SB et al, Cancer 2006)



Why Do Men Choose One Treatment over Another?

A Review of Patient Decision Making for Localized Prostate Cancer

Definition of effective treatment:

1. Extended expected survival or delayed progression : 42% of patients
90% of physicians
2. Preservation of QoL : 45% of patients

(Zeliadt SB et al, Cancer 2006)



"For a patient with prostate cancer,
if treatment for cure is necessary, is it possible?
If possible, is it necessary?"



Fig. 1. Willet F. Whitmore Jr., M.D. 1917–1995. The father of modern urologic oncology. Permission to publish this photograph provided by his son, Willet F. Whitmore, III, M.D. (Color version of figure is available online.)



Conclusion:

- No clear cut evidence that could determined wether RP is the best treatment modality

I DO NOT operate if:

- Life expectancy < 10 years
- Comorbidity or performance status might influence the survival or increase post-operative complication
- Complication could not be tolerated by the patient or will decrease his QoL significantly in respect of his lifestyle / occupation



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