

Brachiterapia con impianto permanente nel trattamento del carcinoma prostatico

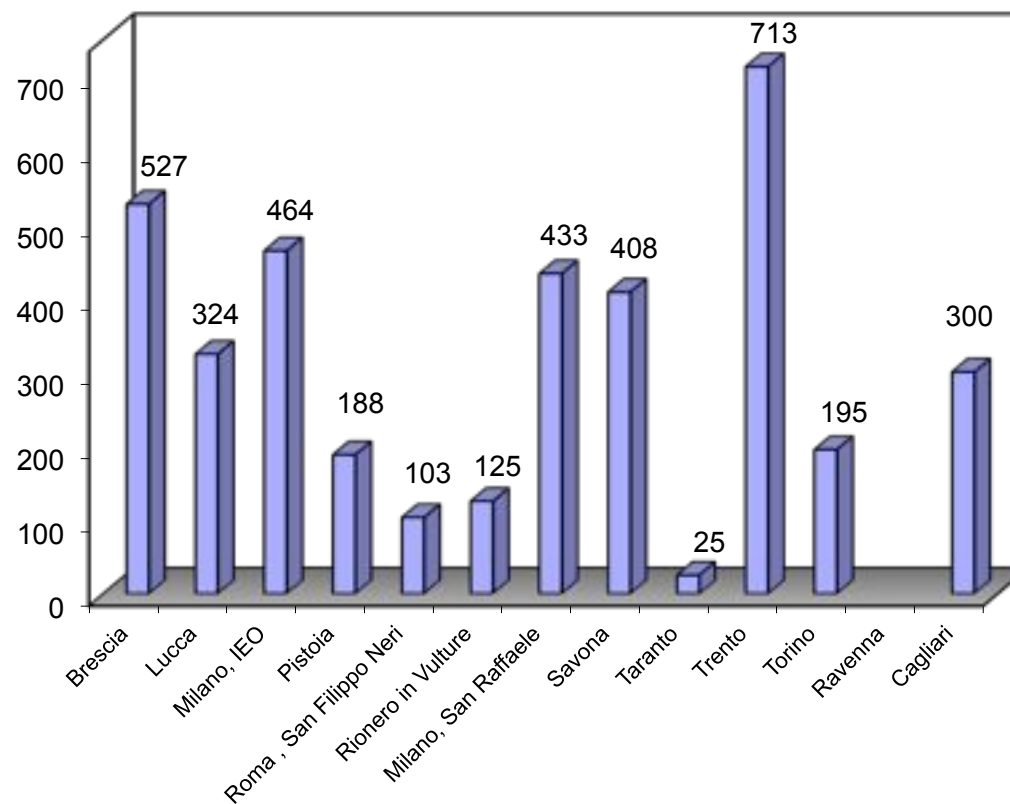
Analisi multicentrica italiana su 2326 pazienti da 11 istituti

*Gianni Fellin - Alessandra Mirri - Luigi Santoro...
...e 11 istituti*



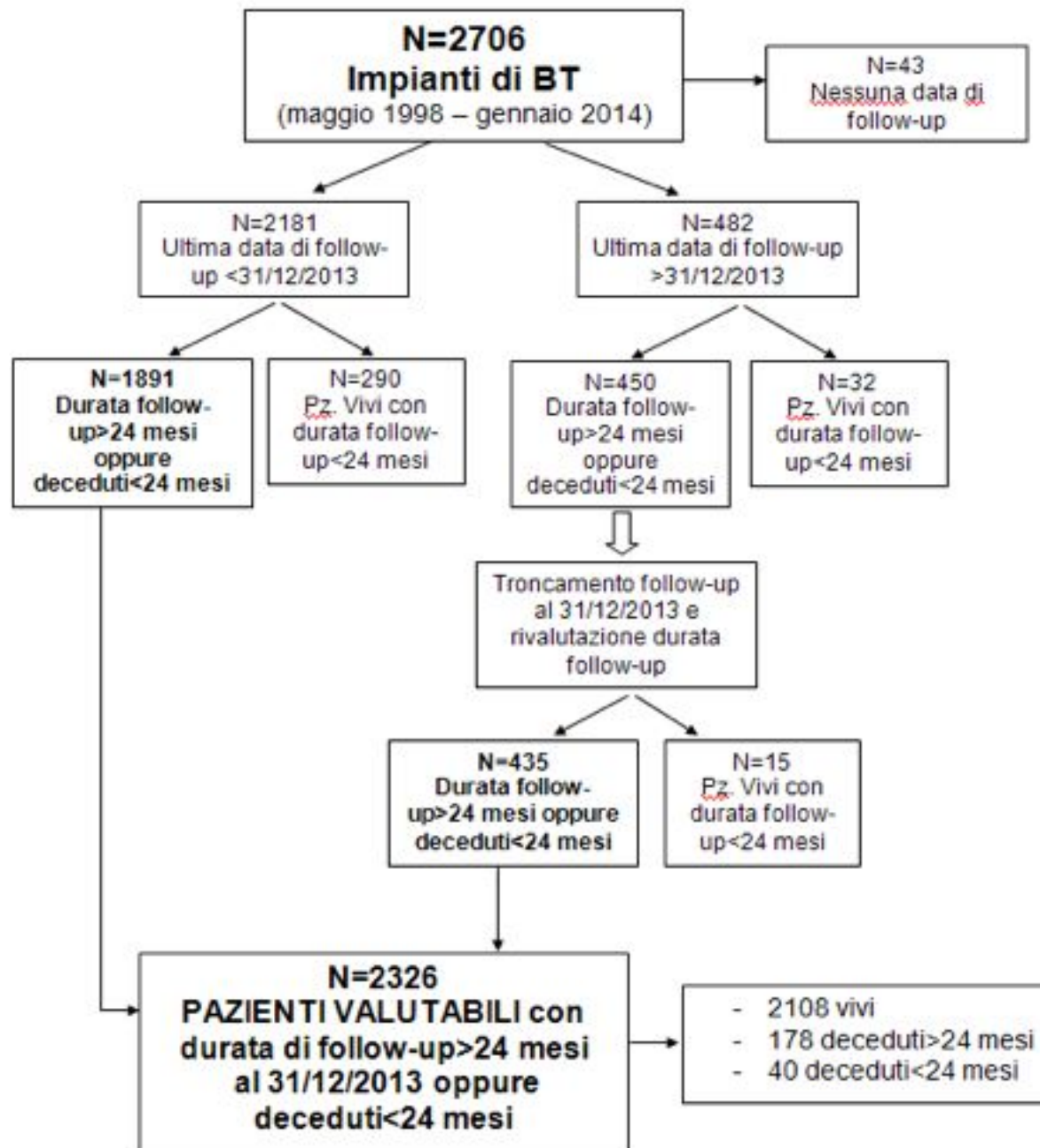
XXIV AIRO - Padova - 9 novembre 2104

Pazienti trattati in Italia con Brachiterapia LDR – 1998-2014
12/13 istituti – 3805 pazienti



FLOW-CHART

identificazione casistica (follow-up minimo di 24 mesi al 31/12/2013)

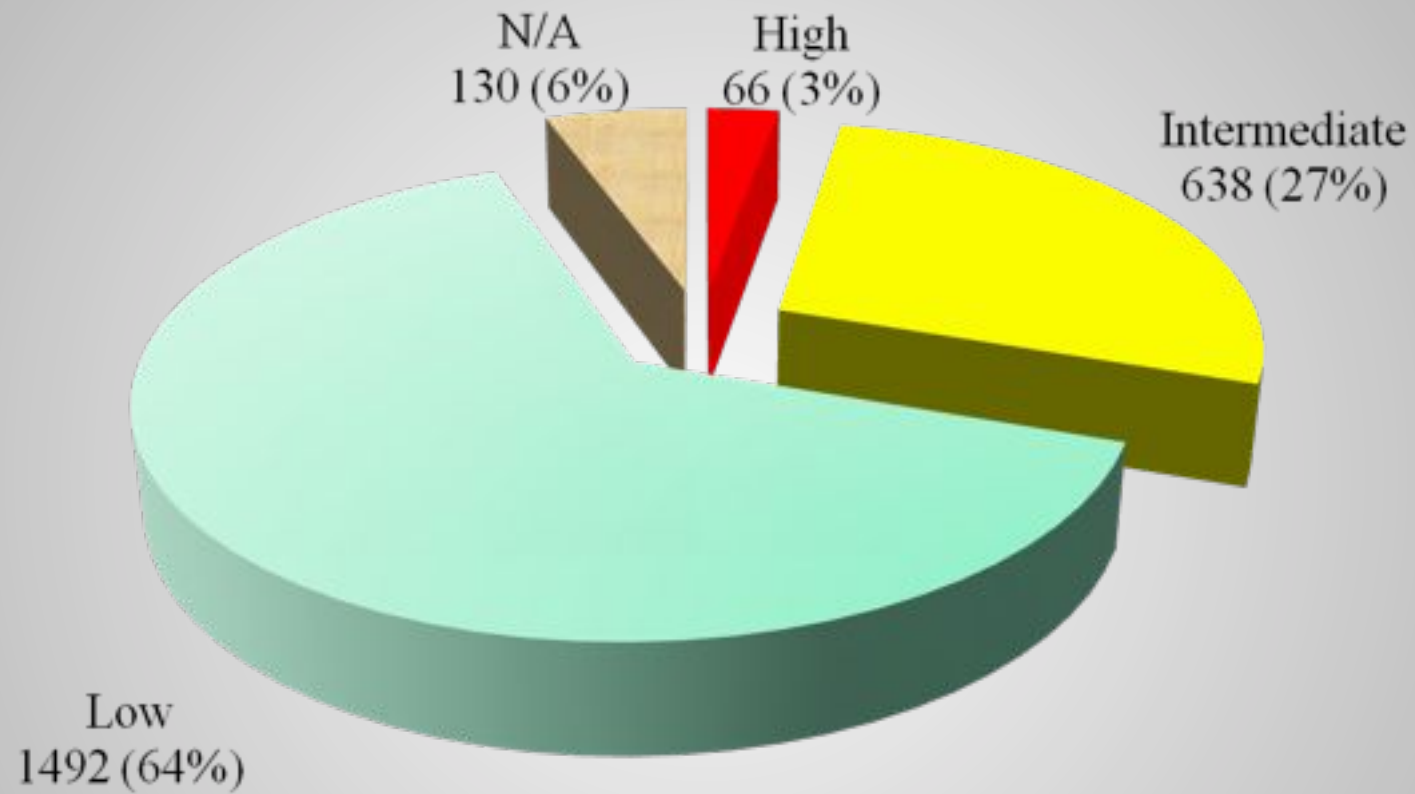


Brachi prostata LDR in Italia

- *Periodo dello studio: mag 1998 – dic 2011;*
 - *analisi retrospettiva dicembre 2013*
 - *follow up mediano 5 anni (min-max: 2-14)*

- *2326 pazienti*
 - *età mediana: 68 (39-86)*
 - *I₁₂₅ 97% Pd₁₀₃ 3%*
 - *OT citoriduttiva per 2-6 mesi: 941 pz (40%)*
 - *associazione con RTE: 89 pazienti (4%)*

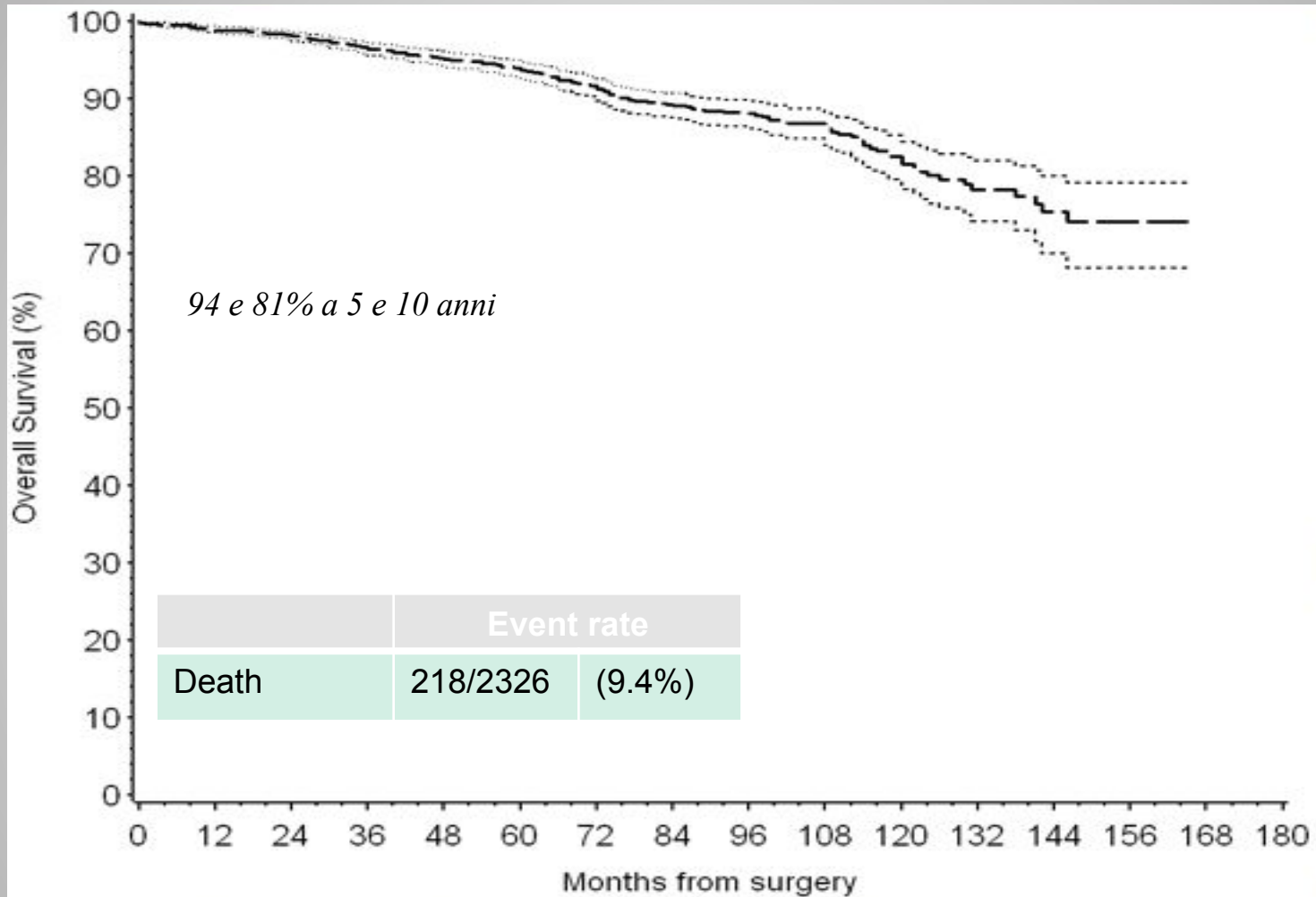
Classi di Rischio NCCN



Postplanning (I125 monoterapia)

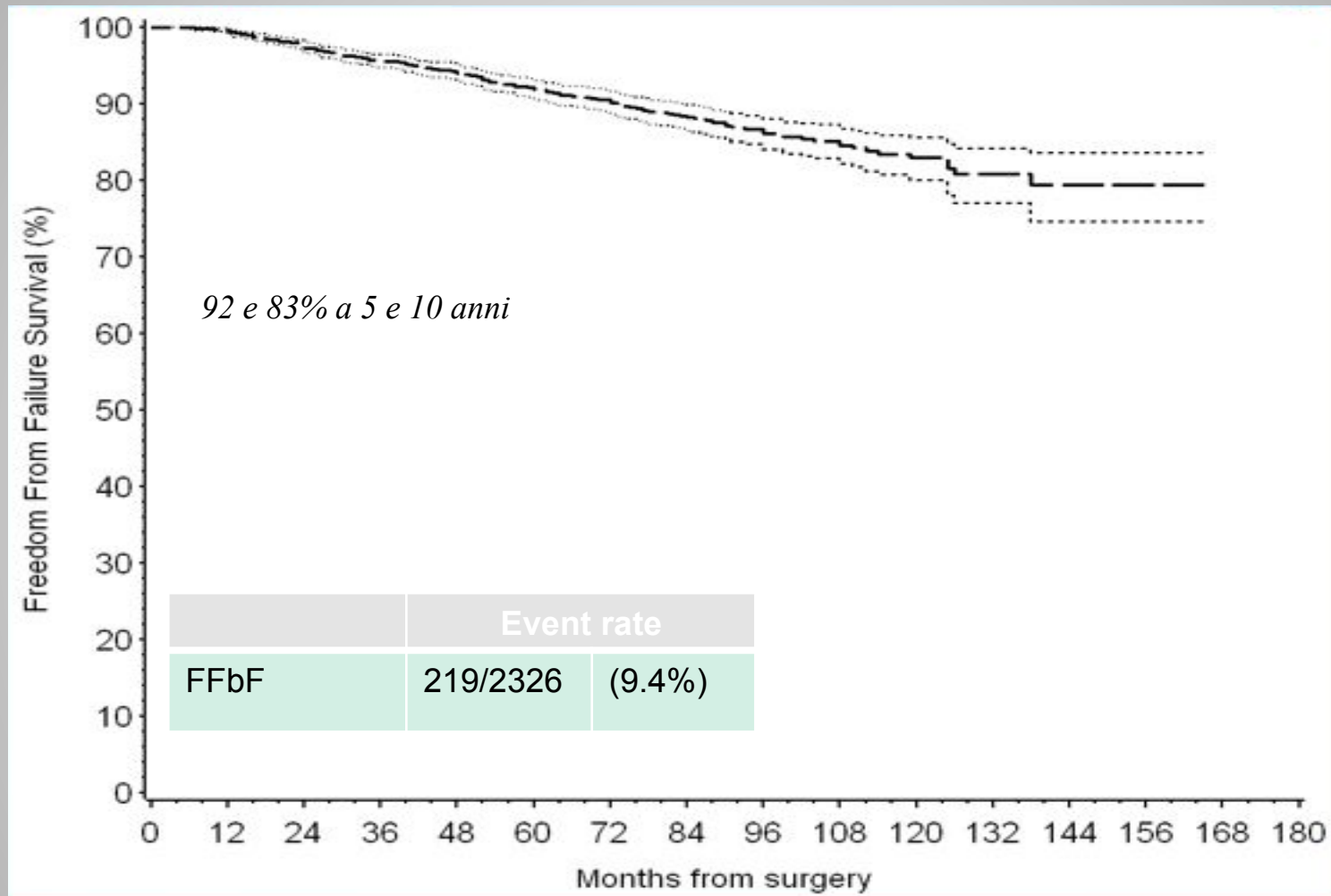
- ✓ *D90 mediana (dose erogata al 90% della prostata) 149 Gy*
- ✓ *V100 mediano (volume prostatico con dose ≥ 145 Gy) 93%*

Overall Survival



Pts at risk	2326	2285	1605	1030	573	226	63	0
Survival (%)	100	98.1	95.1	91.2	88.0	81.5	75.4	
95% CI	(-)	(97.4-98.6)	(94.0-95.9)	(89.7-92.5)	(86.2-89.7)	(78.2-84.3)	(70.0-79.9)	

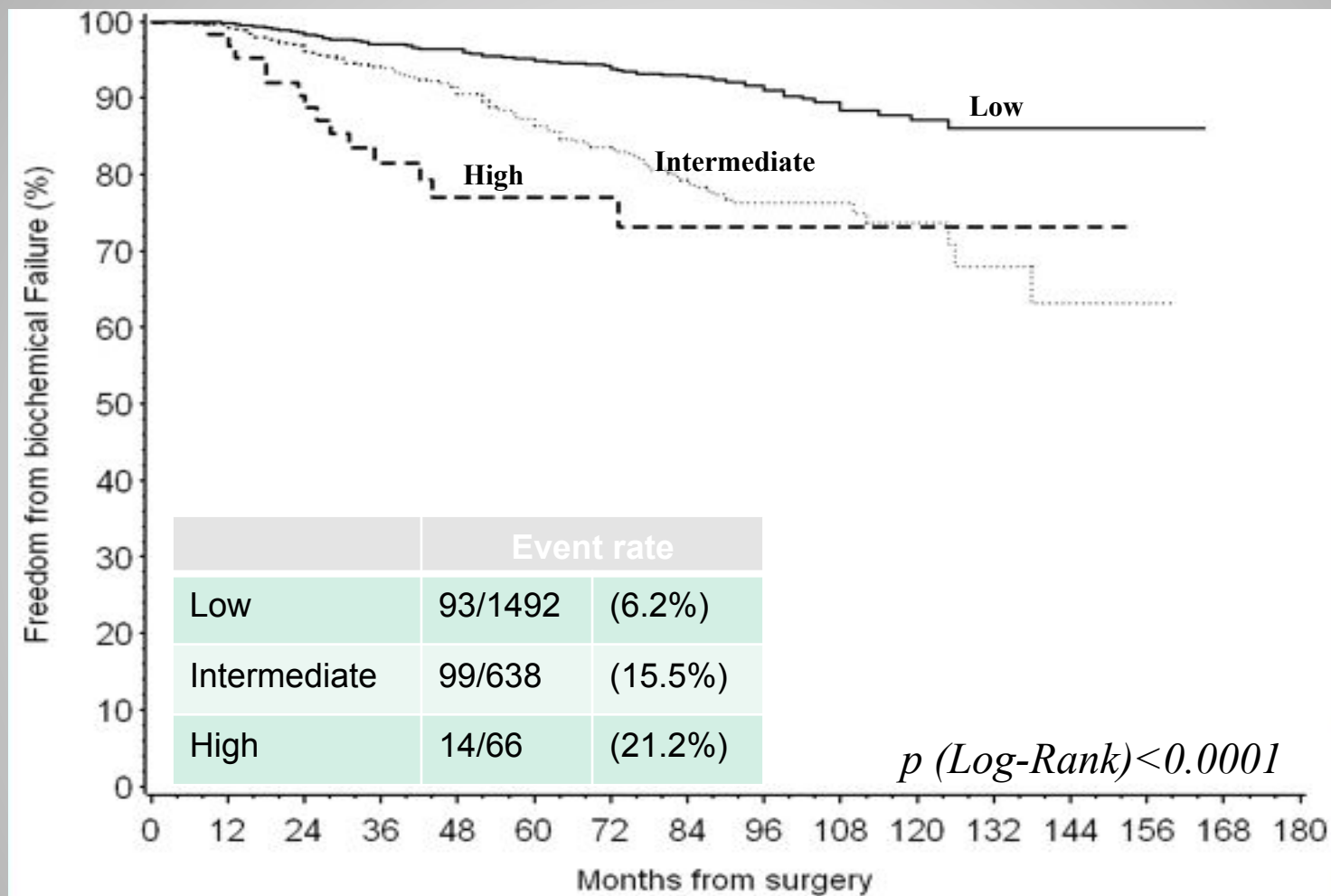
Freedom From Biochemical Failure Survival (*nadir+2*)



Pts at risk	2326	2217	1508	929	488	168	36	0
Survival (%)	100	97.3	94.0	90.1	86.1	83.0	79.4	
95% CI	(-)	(96.6-97.9)	(92.9-95.0)	(88.6-91.5)	(84.0-88.0)	(80.0-85.5)	(74.5-83.5)	

Freedom From Biochemical Failure Survival

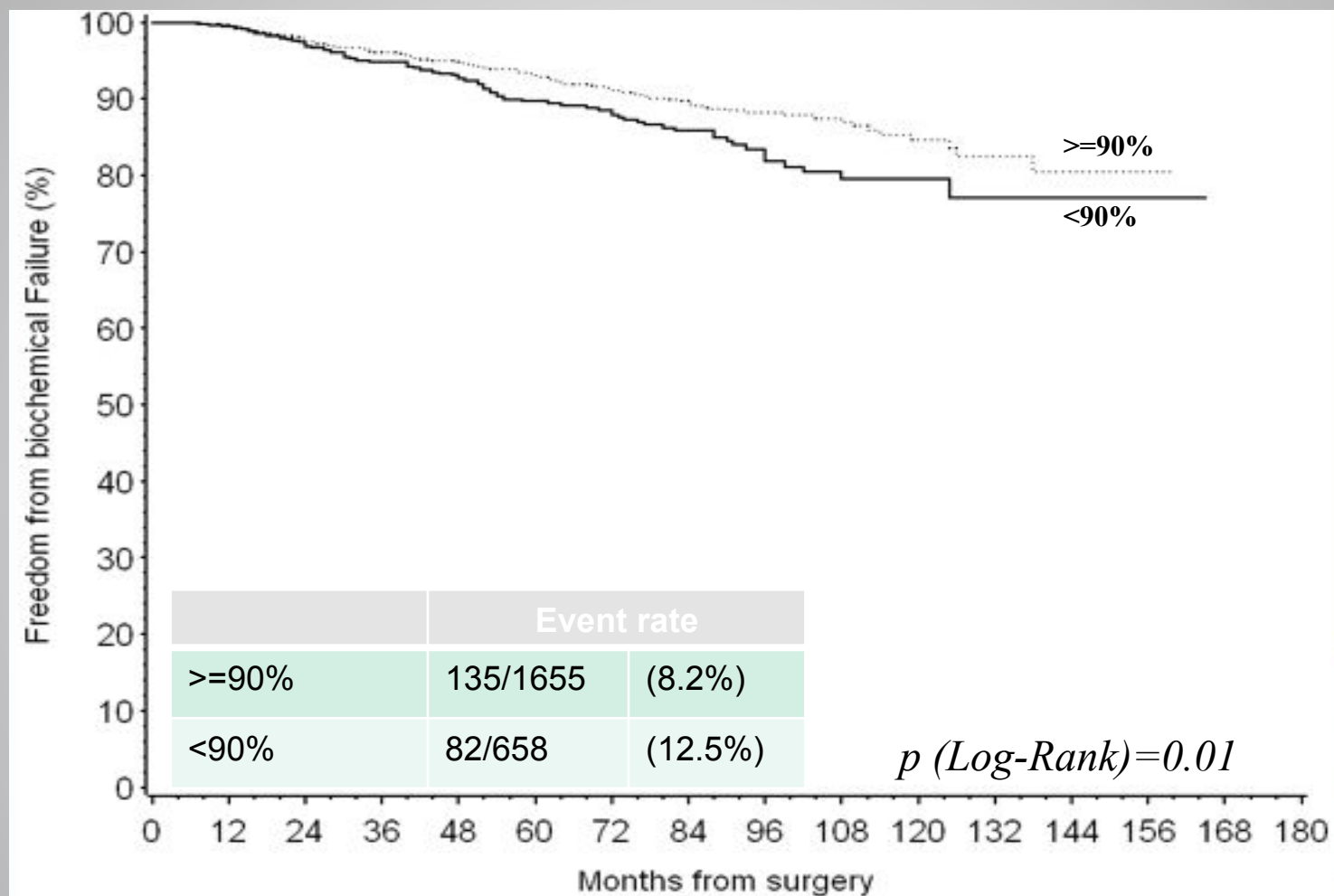
Low vs. Intermediate vs. High risk



D'Amico Score	FFbF (n)	FFbF (n)	FFbF (n)	FFbF (n)	FFbF (n)	FFbF (n)	FFbF (n)	FFbF (n)
Low	100 (1492)	98.2 (1441)	96.3 (998)	93.7 (619)	91.0 (321)	87.1 (117)	86.0 (119)	-
Intermediate	100 (638)	96.1 (595)	90.6 (393)	83.3 (237)	76.2 (125)	73.6 (38)	63.1 (10)	-
High	100 (66)	88.2 (54)	77.0 (32)	77.7 (20)	73.1 (10)	73.1 (2)	73.1 (2)	-

Freedom From Biochemical Failure Survival

$V100 \geq 90\%$ vs. $V100 < 90\%$



V100	FFbF (n)	FFbF (n)	FFbF (n)	FFbF (n)	FFbF (n)	FFbF (n)	FFbF (n)	FFbF (n)
$\geq 90\%$	100 (1655)	97.5 (1581)	94.7 (1049)	91.1 (643)	88.2 (332)	84.6 (114)	80.5 (25)	-
$< 90\%$	100 (658)	96.9 (624)	92.7 (454)	87.9 (282)	81.8 (155)	79.5 (53)	77.1 (11)	-

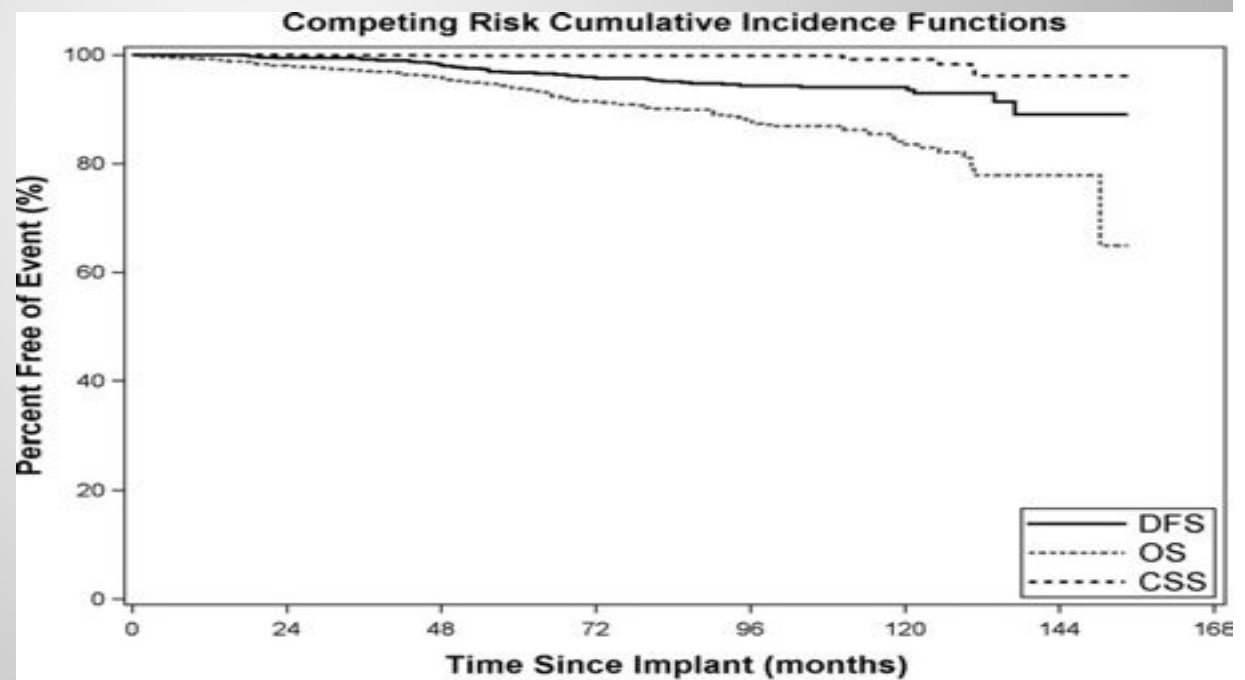
Population-Based 10-Year Oncologic Outcomes After Low-Dose-Rate Brachytherapy for Low-Risk and Intermediate-Risk Prostate Cancer

W. James Morris, MD, FRCPC^{1,2}; Mira Keyes, MD, FRCPC^{1,2}; Ingrid Spadinger, PhD^{2,3}; Winkle Kwan, MD, FRCPC^{2,4}; Mitchell Liu, MD, FRCPC^{1,2}; Michael McKenzie, MD, FRCPC^{1,2}; Howard Pai, MD, FRCPC^{2,5}; Tom Pickles, MD, FRCPC^{1,2}; and Scott Tyldesley, MD, FRCPC^{1,2}

Cancer 119 (2013) 1537-46

British Columbia Cancer Agency database - 1006 patients - median fu 7.5 y

*5 and 10-y actuarial DFS rates:
96.7% and 94.1%*



Numbers at risk:

year	0	2	3	4	5	6	7	8	9	10	11	12
N	1006	928	876	804	702	605	525	392	260	145	59	15

Declining use of brachytherapy for the treatment of prostate cancer

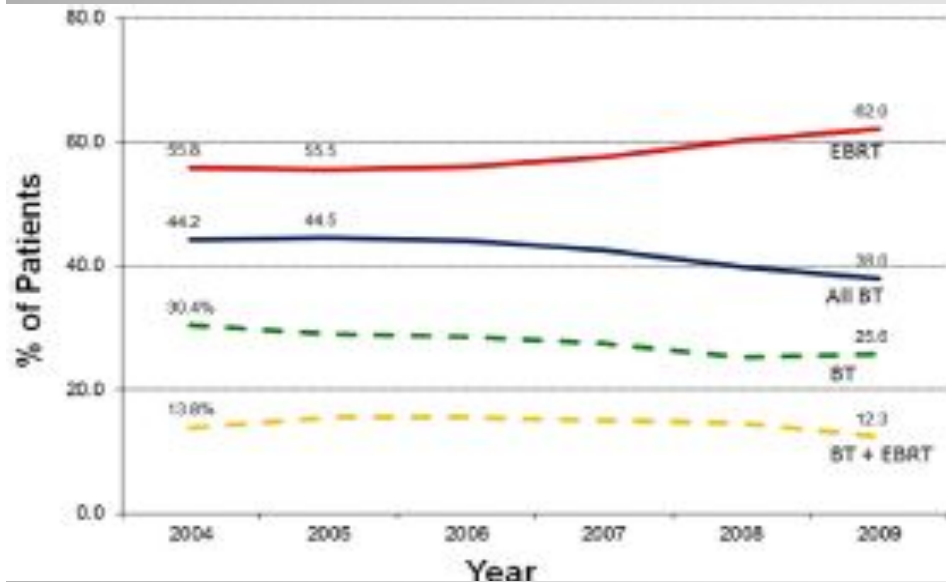
Usama Mahmood^{1,*}, Thomas Pugh¹, Steven Frank¹, Lawrence Levy¹, Gary Walker¹,
Waqar Haque¹, Matthew Koshy², William Graber³, David Swanson³, Karen Hoffman¹,
Deborah Kuban¹, Andrew Lee¹

¹Department of Radiation Oncology, University of Texas MD Anderson Cancer Center, Houston, TX

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³Department of Urology, University of Texas MD Anderson Cancer Center, Houston, TX

Brachytherapy 13 157-62 2014



- *We believe that the declining utilization of BT is likely multifactorial*
- *Decline in the utilization of BT coincides with recent advances in EBRT*
- *IMRT is associated with higher reimbursement rates than BT, health care providers and institutions have a greater financial incentive to offer such treatment*
- *In addition BT also suffers from a lack of emphasis during residency training. To perform prostate BT, a physician requires hands-on training to master the skills necessary to safely and effectively perform prostate BT*
- *This trend will have a substantial impact on national health care expenditure.*

The Rise and Fall of Prostate Brachytherapy: Use of Brachytherapy for the Treatment of Localized Prostate Cancer in the National Cancer Data Base

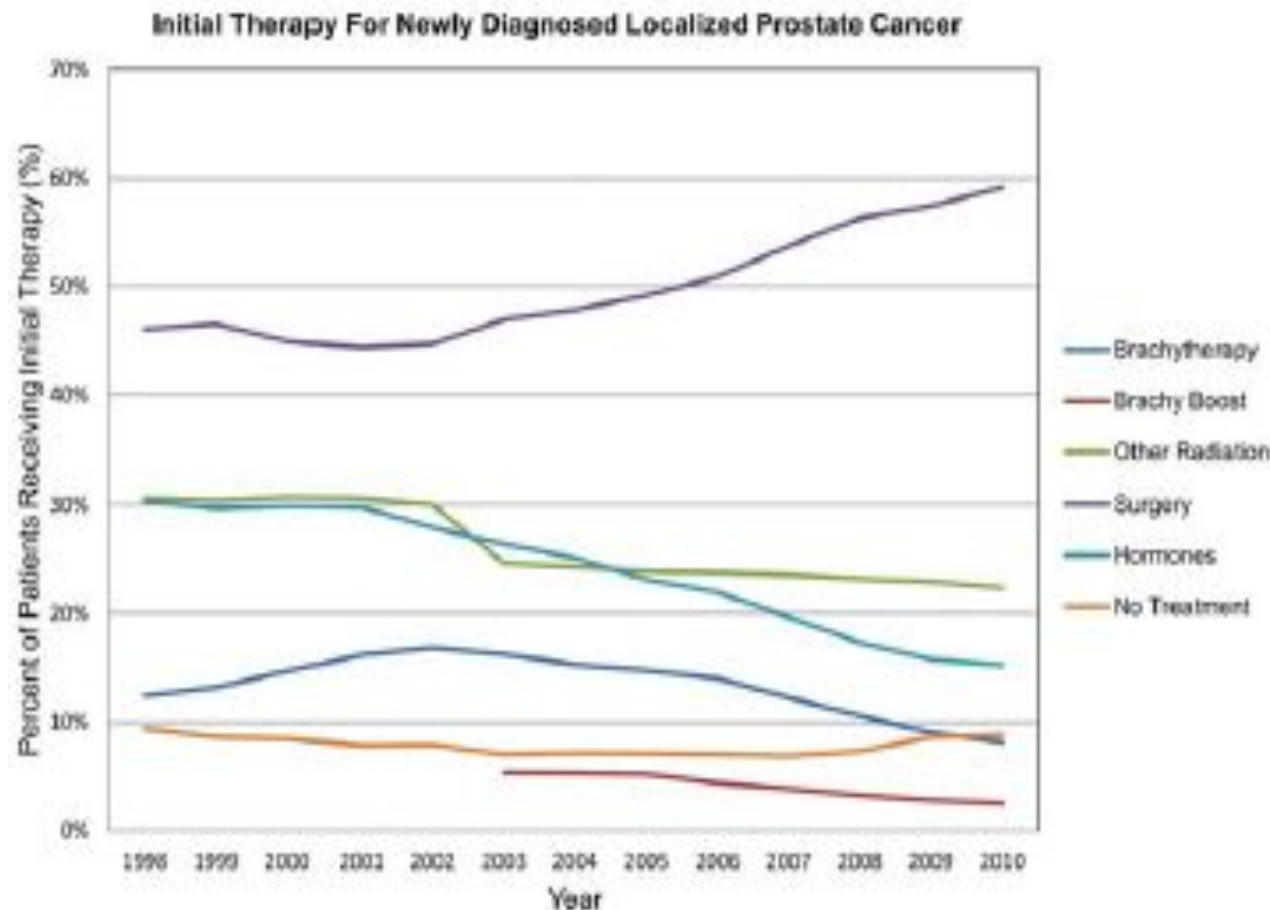
Jeffrey M. Martin, MD, MS¹; Elizabeth A. Handorf, PhD²; Alexander Kutikov, MD³; Robert G. Uzzo, MD³; Justin E. Bekelman, MD⁴; Eric M. Horwitz, MD¹; and Marc C. Smaldone, MD, MSHP³

Cancer 2014;120:2114–21

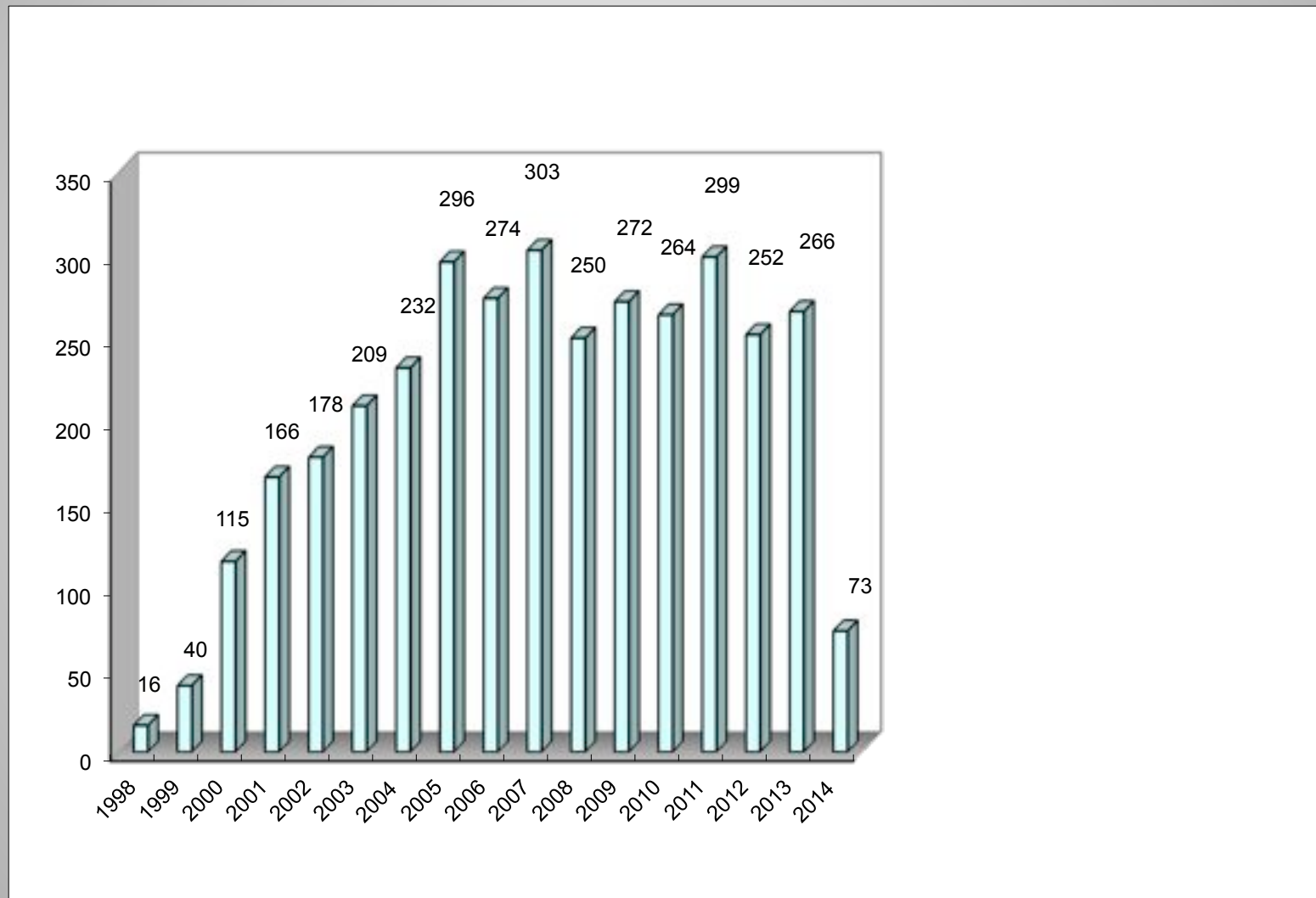
Prior studies have consistently demonstrated that brachytherapy is among the most cost-effective treatment options for patients with localized prostate cancer.

The declining use of brachytherapy compared with more costly emerging therapies has significant health policy implications.

Identifying barriers to the use of brachytherapy may be an attractive alternative to emerging technologies



*Pazienti trattati in Italia con Brachiterapia LDR – 1998-2014
impianti/anno*



per concludere...

- *iniziativa e cooperazione*
 - ✓ *nei singoli istituti tra le varie competenze per implementare ed applicare la metodica*
 - ✓ *dei vari gruppi nel condurre questa analisi*