

BrachyNext

Working Together to Shape the Future of
Brachytherapy



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What Makes Brachytherapy So Exciting?

Why Patients Should Choose Brachytherapy

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Knowledge Based Oncology

INDIVIDUALIZED

Tailoring treatments by
prognostic/predictive
features

Clinical
decision

ADAPTIVE

Tailoring treatments by
continuous monitoring

MODELLING

Prediction by
multidimensional (large)
databases
Propagation of dynamic
representation of knowledge





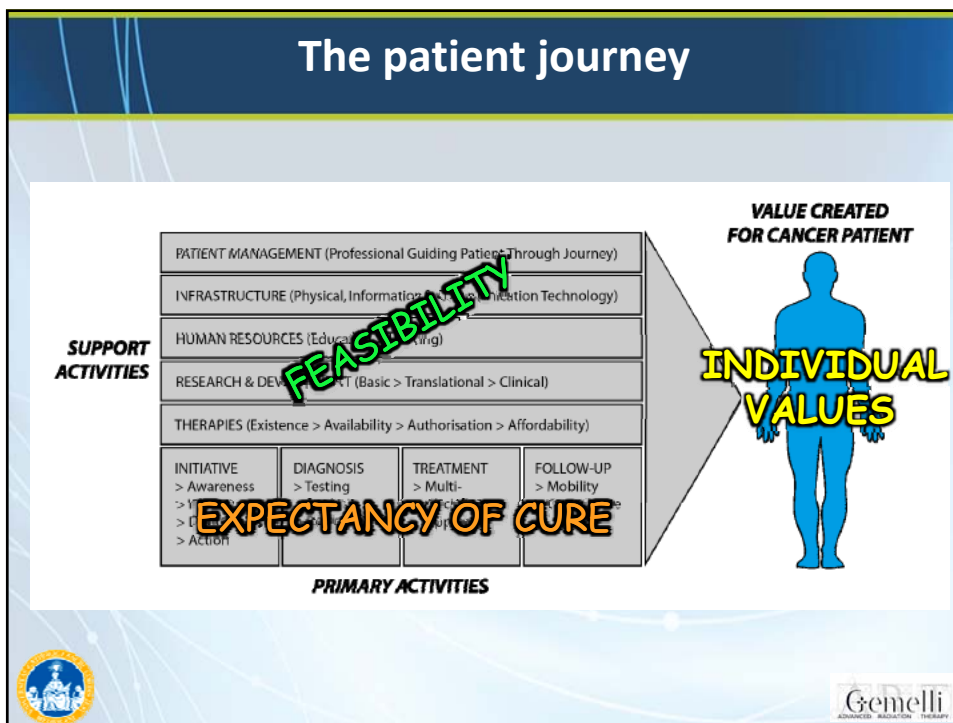
Knowledge Based Oncology

The tool contains a set of questions that you can directly answer and weight depending on your personal preferences and circumstances.

After completing the set of questions, your preferred treatment modality based on the posed questions becomes clear. You can then print your result and discuss it with your treating physician.

DECISION AID TOOL

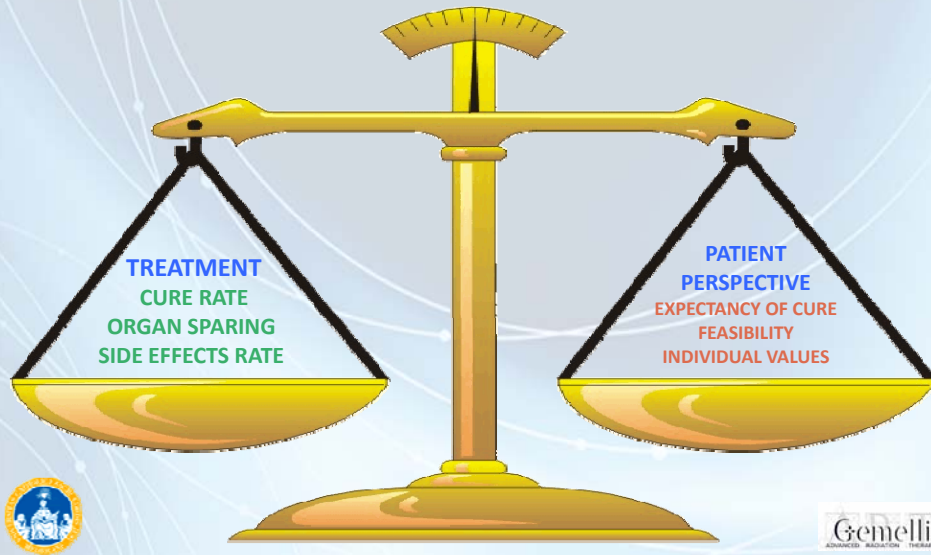
The patient journey



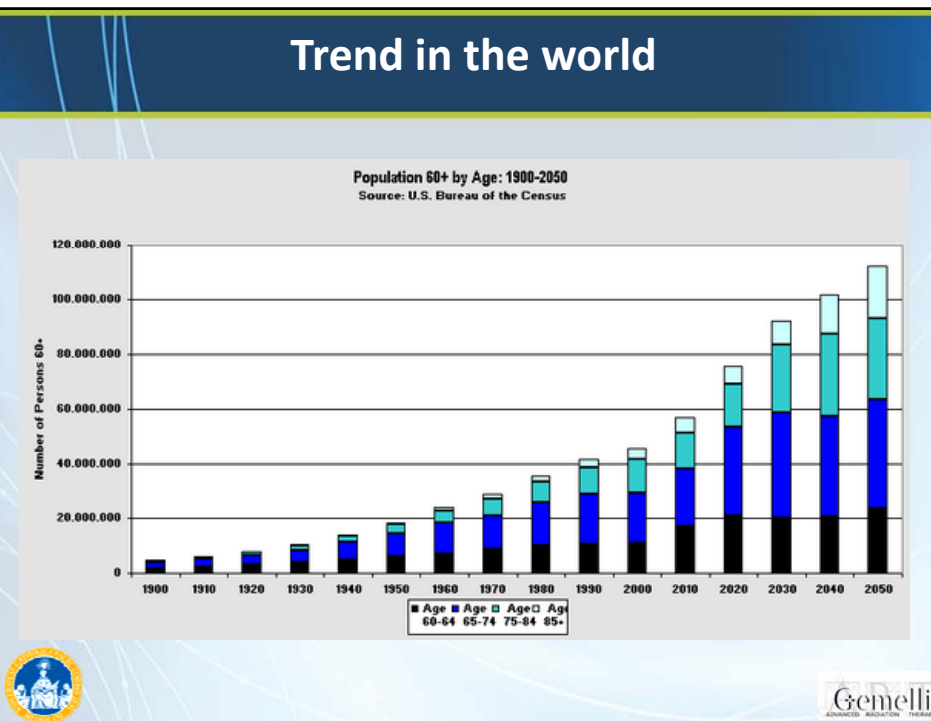


Personalized treatments

The choice of the best treatment



Trend in the world





BT vs SURGERY

SAFER ANESTHETIC TECHNIQUES

LOCAL OR SPINAL ANESTHESIA
OR MILD SEDATION

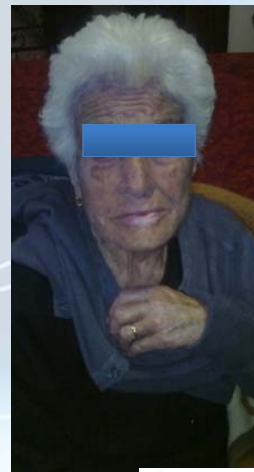


**ESPECIALLY
FOR THE ELDERLY**



BT vs SURGERY

ORGAN SPARING

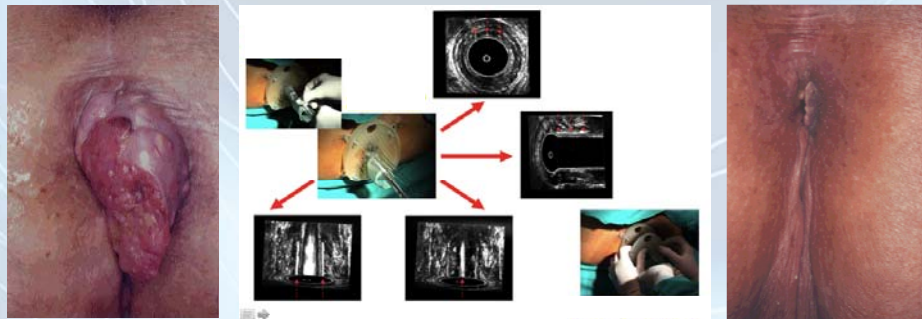




BT vs Surgery

IGBT

(Image Guided BrachyTherapy)



BT vs Surgery

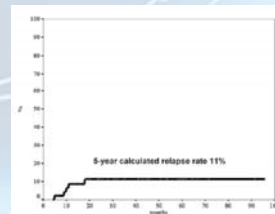
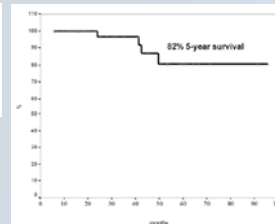
Multimodal therapy of anal cancer added by new endosonographic-guided brachytherapy

J. M. Doniec,^{1*} B. Schniewind,^{1*} G. Kovács,² V. Kahlke,¹ M. Loehnert,³ B. Kremer¹

US-guided brachytherapy

- is safe in terms of side effects
- in comparison to conventional brachytherapy

**IMPROVE LOCAL CONTROL
AND MINIMIZE MORBIDITY**

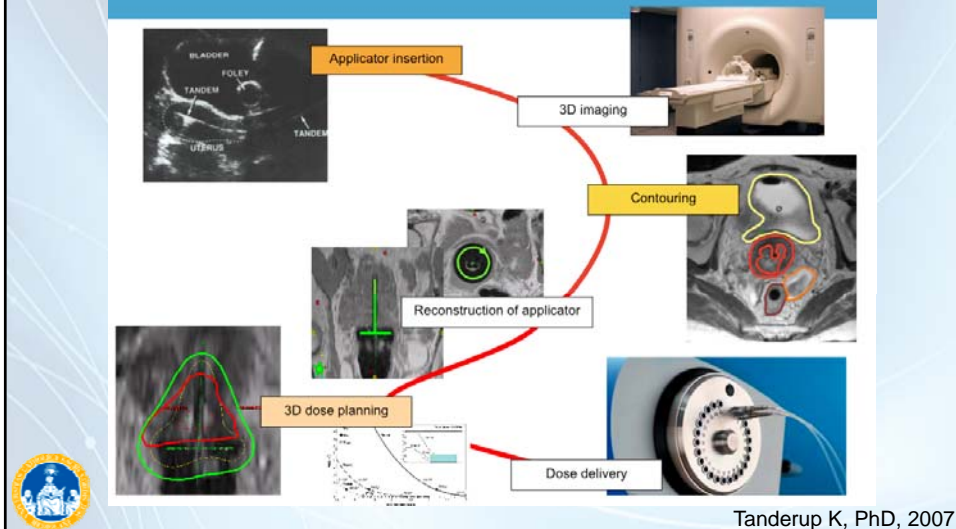


Surg Endosc. 2006 Apr;20(4):673-8. Epub 2006 Jan 21. Multimodal therapy of anal cancer added by new endosonographic-guided brachytherapy. Doniec JM, Schniewind B, Kovács G, Kahlke V, Loehnert M, Kremer B.



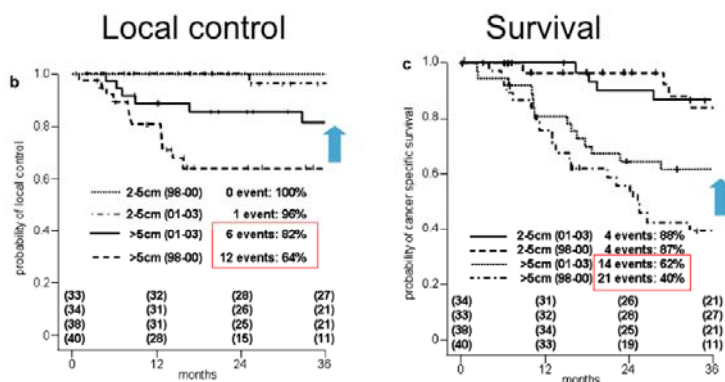
BT vs Surgery

The 6 steps of MRI guided brachytherapy



BT vs Surgery

MRI guided brachytherapy



Pötter R, Rad Oncol, 2007



BT + SURGERY

ORGAN SPARING



BT + SURGERY

ORGAN SPARING



SURGERY

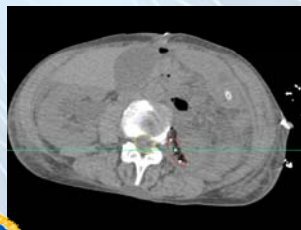


BRACHYTHERAPY





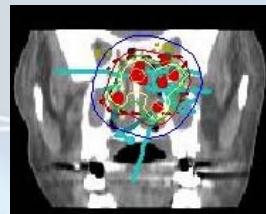
BT + Surgery



**ENLARGEMENT
OF THE SURGICAL MARGIN**



BT + Surgery

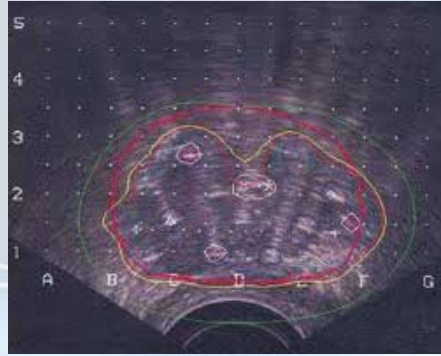
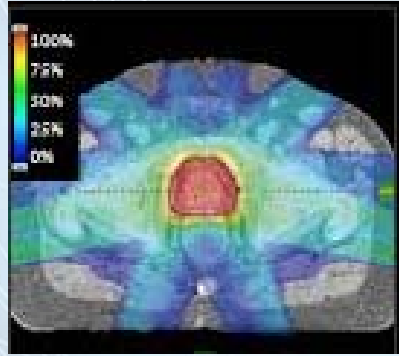


**POSSIBILITY TO PERFORM THE IRRADIATION
WITH ENDOSCOPIC SURGICAL TECNIQUE**





BT vs ERT

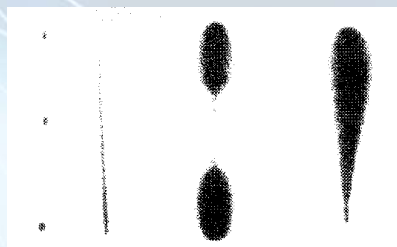


BT vs ERT

IMBT

(Intensity Modulated BrachyTherapy)

Ch	Length	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
1	150.0	●	●	●	●	●	●	●	●	●	●											
2	150.0	●	●	●	●	●	●	●	●	●	●											
3	150.0	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●





BOOST BT after ERT

Table 5. Late urinary and low-GI toxicity risk (RTOG/EORTC/LENT-SOMA scoring systems) after dose escalation with external radiotherapy followed by a boost of hypofractionated high-dose rate brachytherapy with Ir¹⁹²

Authors (reference)	n	EBRT (total dose in Gy)	HDR-BT (no. of fractions × dose/fraction)	NTD ($\alpha/\beta = 2$ Gy)	NTD ($\alpha/\beta = 4$ Gy)	Median follow-up (mo)	Grade ≥ 2 urinary toxicity (% risk)	Grade ≥ 2 low-GI toxicity (% risk)
Aström <i>et al.</i> (23)	214	50	2 × 10 Gy	110	98	48	36*	17*
Demanès <i>et al.</i> (24)	209	36	4 × 5.5 or 6 Gy	77–84	70–76	87	19 [†]	2 [‡]
Duchesne <i>et al.</i> (25)	108	46	4 × 4 or 5 Gy	70–81	67.4–76	78	25*	11*
Galalae <i>et al.</i> (26)	144	40	2 × 9 Gy (prostate) 2 × 15 Gy (peripheral zone)	89.5 127.5	79 135	96	6.2 [†]	11 [†]
Hoskin <i>et al.</i> (27)	109	35.75 [†]	2 × 8.5 Gy	87	75.6	30	40 [‡]	20 [‡]
Martin <i>et al.</i> (28)	102	39.6–45	4 × 5 or 7 Gy	80–102.6	75–90.9	31	12 [†]	7 [†]
Present study	77	64–64.4	2 × 6, 7, or 8 Gy (peripheral zone)	88–104	78–96.4	41	8.5 [‡]	5.5*

“Boosting a partial volume of the prostate with hypofractionated HDR-BT for aggressive prostate cancer was feasible and showed limited long-term toxicity, which compared favorably with other dose-escalation methods in the literature”

- Hypofractionated boost with high-dose-rate brachytherapy and open magnetic resonance imaging-guided implants for locally aggressive prostate cancer: a sequential dose-escalation pilot study. Ares C, Popowski Y, Pampallona S, Nouet P, Dipasquale G, Bieri S, Ozsoy O, Rouzaud M, Khan H, Miralbell R. *Int J Radiat Oncol Biol Phys.* 2009 Nov 1;75(3):656-63. doi: 10.1016/j.ijrobp.2008.11.023. Epub 2009 Feb 26.

BOOST BT after ERT

LOWER OVERAL TREATMENT TIME

- **Radiobiological advantages**
- **Comfortable treatment for the patient**
 - it can more be compatible with the needs of work and family.
 - It is also an advantage for the patient who have to do the treatment away from home while reducing costs for accommodation.



