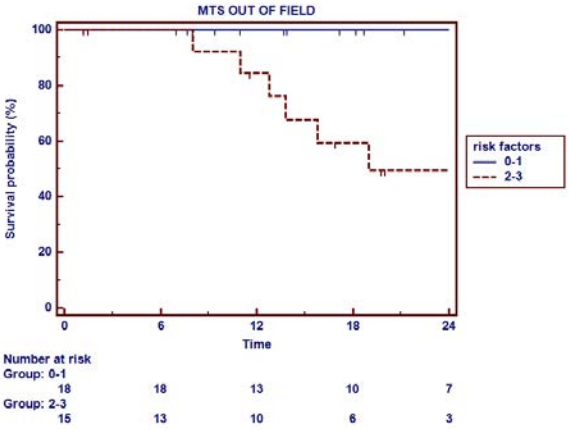
View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by Elsevier - Publisher Connector

patients by the presence of 0-1 or 2-3 risk factor, the 2-year actuarial FFDP was 100% and 49% respectively (p=0,01, Fig 1).



Conclusion: Although with a small cohort and a limited follow-up, these results seem to suggest that radical dose RT to all localization of disease is a valid approach in osseous OPC patients in association with ADT, also considering the low toxicity profile. Our predictive model aiming at identifying which patients may benefit of this kind of treatment seems to show that the ideal candidate could be a previously operated patient, with a iPSA≤24,2 ng/ml and with only one bone metastasis.

EP-1348

Endoscopic evaluation of late rectal toxicity after radiotherapy in 597 prostate cancer patients

M. Nuzzo[1], G. Macchia[1], S. Cilla[2], M. Ingrosso[3], C. Digesù[1], L. Di Lullo[4], E. Ippolito[5], F. Deodato[1], G. Siepe[6], M. Ntreta[6], M. Pieri[6], S. Cammelli[6], R. Schiavina[7], G. Martorana[7], A. Di Lallo[8], A.L. Angelini[9], G. Frezza[10], V. Valentini[11], A.G. Morganti[6]

[1]*Fondazione di Ricerca e Cura "Giovanni Paolo II"- Catholic University of Sacred Heart, Radiation Oncology Unit, Campobasso, Italy*
[2]*Fondazione di Ricerca e Cura "Giovanni Paolo II"- Catholic University of Sacred Heart, Medical Physic Unit, Campobasso, Italy*
[3]*Fondazione di Ricerca e Cura "Giovanni Paolo II"- Catholic University of Sacred Heart, Endoscopy Unit, Campobasso, Italy*
[4]*"F. Veneziale" Hospital, Medical Oncology Unit, Isernia, Italy*
[5]*Campus Biomedico University, Radiotherapy Unit, Roma, Italy*
[6]*S. Orsola-Malpighi Hospital- University of Bologna, Radiation Oncology Center- Department of Experimental- Diagnostic and Specialty Medicine – DIMES, Bologna, Italy*
[7]*S. Orsola-Malpighi Hospital- University of Bologna, Department of Medical Physics, Bologna, Italy*
[8]*"A. Cardarelli" Hospital, Oncological Urology Unit, Campobasso, Italy*
[9]*S. Orsola-Malpighi Hospital- University of Bologna, Department of Urology, Bologna, Italy*
[10]*Bellaria Hospital, Radiotherapy Department, Bologna, Italy*
[11]*Policlinico Universitario "A. Gemelli"- Catholic University of Sacred Heart, Department of Radiotherapy, Roma, Italy*

Purpose or Objective: Late rectal toxicity (LRT) is one of the main limitations of external radiotherapy (RT) for prostate cancer (PC). Purpose of this study was to evaluate the impact of various parameters on LRT, in a large cohort of patients undergoing radical or adjuvant RT in a series of clinical trials.

Material and Methods: 597 patients were selected (median age: 70 years; range: 43-88; NCCN risk class: 59 low, 199 intermediate, 339 high). Impact on grade ≥2 (RTOG) LRT of a series of parameters was analysed: previous radical prostatectomy, RT technique, type and duration of any adjuvant hormone therapy, RT dose and fractionation, acute rectal toxicity. LRT free survival curves were estimated according to the Kaplan Meier method. Univariate analysis was performed using log-rank test. Multivariate analysis was performed using "Cox's proportional hazard models".

Results: Table 1 shows the results of the analysis. Overall, grade > 2 LRT free survivals was respectively 89.5% and 84.9% at 2 and 5 years. At univariate analysis only acute rectal toxicity was significantly related to LRT (p <0.001) while there was a negative trend in patients receiving adjuvant hormone therapy, especially with LH-RH analogues. Multivariate analysis confirmed only the correlation between acute rectal toxicity and LRT (p: 0.006).

Table 1: Grade ≥ 2 late rectal toxicity free survival (%)

		Patients	2-year	5-year	Univariate analysis (log-rank), p:	Multivariate analysis (Cox), p:
Previous R.P.	no	403	88.6	81.1	0.175	
	yes	194	91.6	91.6		
Technique	3D	155	91.1	87.3	0.878	
	IMRT	418	88.4	80.1		
	VMAT	23	95.0	n.v.		
A.O.T. type	no	49	100.0	87.5	0.065	0.991
	LH-RH analogue	287	86.8	83.7		
	Bicalutamide	239	90.8	86.5		
A.O.T. duration	no	49	100.0	87.5	0.539	
	6 months	250	86.6	85.3		
	24 months	298	90.5	85.5		
Dose	≤ 70 Gy	378	90.0	90.0	0.303	
	> 70 Gy	219	88.7	83.1		
ENI	no	75	85.7	70.6	0.268	
	yes	522	90.5	89.9		
Fractionation	≤ 2 Gy/fr.	227	89.0	83.6	0.413	
	> 2 Gy/fr.	370	89.7	89.7		
Acute toxicity	G 0-2	571	90.3	85.6	<0.001	0.006
	G > 2	10	50.6	50.6		

R.P: radical prostatectomy; A.O.T.: adjuvant hormone therapy; ENI: elective nodal irradiation.

Conclusion: The results of this analysis showed no correlation between treatment parameters and LRT. This unexpected result is likely to be related to the use of modulated RT techniques in the majority of patients and to the distribution of the analysed parameters. For example, patients who have previously undergone radical prostatectomy, or treated with a hypofractionated regimen, generally received a lower total dose. The close correlation between acute and late toxicity seems to confirm the existence of a "consequential late toxicity" in radiation-induced damage to the rectum. This seems to suggest the utility of close endoscopic monitoring in the follow-up of patients with severe acute rectal toxicity.

EP-1349

Long term results of a phase I-II study of moderate hypofractionated IGRT in prostate cancer

N. Di Muzio[1], A. Fodor[1], B. Noris Chiorda[1], S. Broggi[2], P. Mangili[2], R. Valdagni[3], I. Dell'Oca[1], M. Pasetti[1], C. Deantoni[1], A. Chiara[1], G. Berardi[1], A. Briganti[4], R. Calandrino[2], C. Cozzarini[1], C. Fiorino[2]

[1]*San Raffaele Scientific Institute, Department of Radiotherapy, Milan, Italy*
[2]*San Raffaele Scientific Institute, Medical Physics, Milan, Italy*
[3]*Fondazione IRCCS Istituto Nazionale dei Tumori, Radiotherapy, Milan, Italy*
[4]*San Raffaele Scientific Institute, Department of Urology, Milan, Italy*

Purpose or Objective: To report long term clinical outcomes in prostate cancer patients (pts) treated with IGRT Moderate Hypofractionated Simultaneous integrated boost (SIB) by Tomotherapy in a phase I-II study.

Material and Methods: Between 2005 and 2011, 211pts were treated with IGRT Moderate Hypofractionated SIB in a phase I-II study . A subgroup of 128 pts (55 low- risk[LR], 33 intermediate- risk [IR] and 40high-risk[HR]) with 5 years minimum follow up were considered for this analysis. IR and HR pts received 51,8 Gy on pelvic lymph-nodes (LN) and concomitant SIB to prostate up to 74,2Gy in 28 fr; LR pts were treated to the prostate to 71,4Gy in 28fr. Androgen deprivation (AD) was delivered to 27% LR/57% IR/87% HR pts for a median time of 12.5, 13.7 and 15,5 months (m) respectively. Biochemical relapse free (bRFS) survival (Phoenix definition), cancer-specific (CCS) and overall survival (OS) actuarial curves were assessed. Selected clinical/dosimetry variables were tested as potential predictors of GI /GU toxicity and of BCR/CCS/OS (Cox test) .

Results: Median follow and median age were 75 m (range: 60-99) and 74 y (57-84) respectively, while median Gleason score(GS) was 6 (3-10):GS<7: 75; GS=7: 39; GS>7: 13 ; missing:2. 73 pts were staged as T1, 46 as T2: 6 as T3; and for 3 pts the stage was unclear (Tx). The median initial Psa (iPsa) was 7.8 (1.2-826). The 75-m bRFS was 92.5% (LR: 94.2%; IR: 96.9%; HR: 84.5%); OS was 94.6% (LR:95.9%; IR: 95.8%; HR: 91.1%) and CSS was 97.4% (LR: 100%;IR:94.5%;HR: 97.1%). AD and class risk were not correlated with bRFS/OS/CSS. The incidence of G3 toxicity was around 6% with drastically reduction of the prevalence at the last follow-up for both ≥G2 and ≥G3 toxicities indicating that symptoms were recovered in most patients.

Conclusion: The combination of pelvic LN irradiation and high dose to the prostate, (EQD2=88Gy) delivered with daily image-guided, intensity-modulated, moderate hypofractionation resulted in an excellent 75-m outcome, even in IR/HR patients. This encouraging result seems to be without correlation with AD considering the long time elapsed between the end of the AD and the last follow up of pts. The toxicity profile was acceptable

EP-1350

Postoperative radiation therapy following radical prostatectomy

J.A. Dominguez Rullan[1], A. Hervás[1], T. Muñoz[1], F. López[1], C. Vallejo[1], D. Candini[1], C. De la Pinta[1], D. Ordoñez[1], M. Martín[1], S. Sancho[1]
[1]*Hospital Ramón y Cajal, Radiation Oncology, Madrid, Spain*

Purpose or Objective: To compare clinical results of adjuvant and salvage radiotherapy after radical prostatectomy for prostate cancer and to determinate prognostic factors of biochemical relapse free survival (BRFS).

Material and Methods: 302 patients were treated at our institution over a 12-year period. Overall survival and biochemical-relapse free survival were analized using Kaplan-Meier and multivariate Cox regression analysis was used to assess differences between groups.

Results: Mean age at diagnosis was 65 years (42-80). All patients underwent radical prostatectomy combined with pelvic lymphadenectomy in 47.1% of cases. Neoadjuvant androgen deprivation before surgery was given to 36.5% . Mean pre-RT PSA of 0.46ng/ml (0-12.8 ng/ml). Adjuvant RT (ART) was performed in 113 patients and salvage RT (SRT) in 183 (9 for local recurrence) and mean dosis to surgical bed was 70 Gy (60-76 Gy). The distribution of patients by pT stage was pT2a/b (30.3%), pT2c (35%), pT3 (29%) and pT4 (2.3%). Upgrade in Gleason Score between transrectal biopsy and prostatectomy was experienced by 46.7% of patients. Positive surgical margins were reported in 56.5% of cases. Mean follow-up was 58.85 months (1-153 months). Overall survival at 5 and 10 years was 98.1% and 94.3%, respectively and BRFS at 5 and 10 years was 76.5% vs. 61.8%, respectively. The timing of RT (ART vs. SRT) and pre-RT PSA <0.5 ng/ml were significant predictors of longer BRFS.

GLEASON SCORE		PROSTATECTOMY					
		5	6	7	8	9	10
BIOPSY	5	1	1	0	0	0	0
	6	0	37	61	3	0	0
	7	1	5	57	16	13	1
	8	0	1	4	5	5	0
	9	0	0	0	0	2	0

Conclusion: Postoperative radiation therapy provides excellent long-term overall survival results with an aceptable BRFS with pre-RT PSA <0.5 ng/ml and adjuvant radiotherapy as predictors of better outcomes.

EP-1351

Developing a prostate decision aid tool considering patients and clinicians decisional needs

A.J. Berlanga[1], B.G.L. Vanneste[1], E. Bloemen[1], D. Rijnkels[1], P. Lambin[1]
[1]*MAASTRO Clinic, GROW School for Oncology and Developmental Biology- Maastricht University Medical Centre, Maastricht, The Netherlands*

Purpose or Objective: To facilitate shared decision making, we aim to develop a decision aid tool that helps prostate cancer patients to understand the benefits and side-effects of the treatments offered by their clinicians.
The tool should follow the International Patient Decision Aid Standard, and therefore patient's and doctor's views on decisional needs must be considered. The tool should have a new slant on existing tools: it should personalize the information, guide patients to identify their preferences, and help doctors to understand patients' preferences.

Material and Methods: Patients and clinicians were interviewed to assess their decisional needs. A prototypical tool was developed. Its clarity and acceptability was evaluated by the technology acceptance questionnaire (5-Likert scale).

Results: Prostate cancer patients already treated (N=16) mentioned the need of visual and free of medical jargon information about prostate cancer, treatments, side-effects, and treatment experience. Medical specialists (N=8; radiation oncologists, urologists, nurses) mentioned the need of information about basic anatomy, contraindications, hospital specific figures, and psychological support. Results about comprehensibility of the prototypical tool showed that most the patients fully agree (69%) or agree (31%) that the prototypical tool provides clear information about treatments, their side-effects, the differences between treatments, and eases comparison. Likewise, most of the patients fully agree (69%) or agree (31%) on using the tool if it would became available, and will recommend it to others (67% fully agree; 33% agree).
After considering the views of patients and medical specialists, the result is an alpha version of a web-decision aid tool for prostate cancer patients (http://www.treatmentchoice.info). The tool personalizes information for each patient. It assists patients to decide what their preferences regarding quality of life and treatment experience are, and to think how important are the side-effects for them. It provides a printed report of patients' preferences to be using during consultation. Fig below gives an impression.