Efficacia e tolleranza nel follow up di pazienti trattati con radioterapia "short course" per carcinoma del retto

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ACO S. Filippo Neri, Roma

RECTAL CANCER RADIOTHERAPY

EUROPEAN APPROACH

SCRT

(25G/5CYCLES)

- SHORT COURSE → IMMEDIATE SURGERY
- NO CHANGES IN STAGING
- LOWER COST
- BETTER COMPLIANCE
- DOSE EQUIVALENT TO 30-33G
- EXPECTED ABOUT 66% REDUCTION IN LR
- LONG COURSE → DELAYED SURGERY ??
- DOWNSIZE/DOWNSTAGE??

AMERICAN APPROACH

LCRCT

(45 – 54G/28 CYCLES)

- PROLONGED COURSE → DELAYED SURGERY
- WITH CHEMO
- DOWNSTAGING
- BETTER SURGICAL TOLERANCE
- MORE TUMO[illegible]ION
- MORE SPHIN[illegible]IG
- EXPECTED [illegible]CTION IN LR

RECTAL CANCER:
Diagnostic Work- Up for Staging

- DRE
- Endoscopy (biopsies)
- Endorectal ultrasound: usefull in T1 vs T2 vs borderline T3
- Multislice-CT: - poor accuracy for low tumors and LFN+ vs LFN-
  - M+ staging
- Phased Array MRI: - highly accurate in staging
  - difficulty in T1 vs T2 vs borderline T3
  - highly accurate for CRM
- FDG-PET: - disappointing results on N
  - role in response evaluation

RECTAL CANCER: Multidisciplinary Team

- Colorectal Surgeons
- Radiologist
- Radiotherapist
- Pathologist
- Medical Oncologist
- Gastroenterologist

- Takes place every two weeks
- Makes quick and appropriate referral pathways
- Have a consensus approach for treatment according to agreed protocols
- Permits shared behaviours
- Encourages an efficient team working

RECTAL CANCER

SHORT COURSE RT:

25 Gy in 5 fractions

ANTICIPATED SURGERY (1 wk)

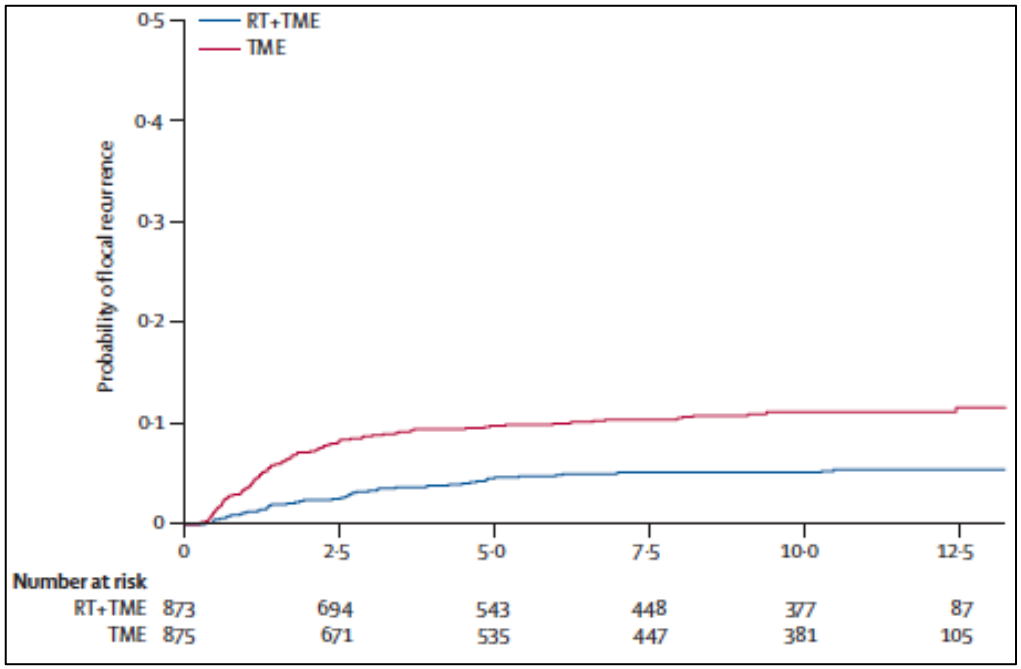
DELAYED SURGERY (6-8 wks)

SC Pre-Op Radiotherapy vs Surgery Alone

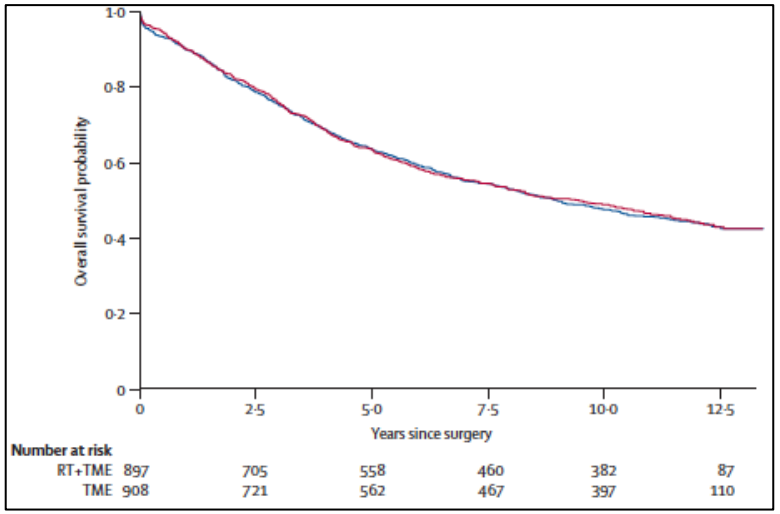
TRIAL	Local Recurrence	OS	p-value
Swedish Rectal Cancer Trial 1987-1990 - NEJM 1997 1,168 pts - Dukes A, B, and C Short Course RT + Surgery vs Surgery Alone	11% 27% (5-yr FU)	58% 48% (5-yr)	LR p<.001 OS p<.001
Dutch CRC Group Trial 1996-2000 - NEJM 2001 1,861 pts - Dukes A, B, and C Short Course RT + TME Surgery vs TME Surgery Alone	2.4% 8.2% (2-yr)	82% 82% (2-yr)	LR p<.001 OS NS

The Dutch TME Trial at 12 years

Local Recurrence



Overall Survival



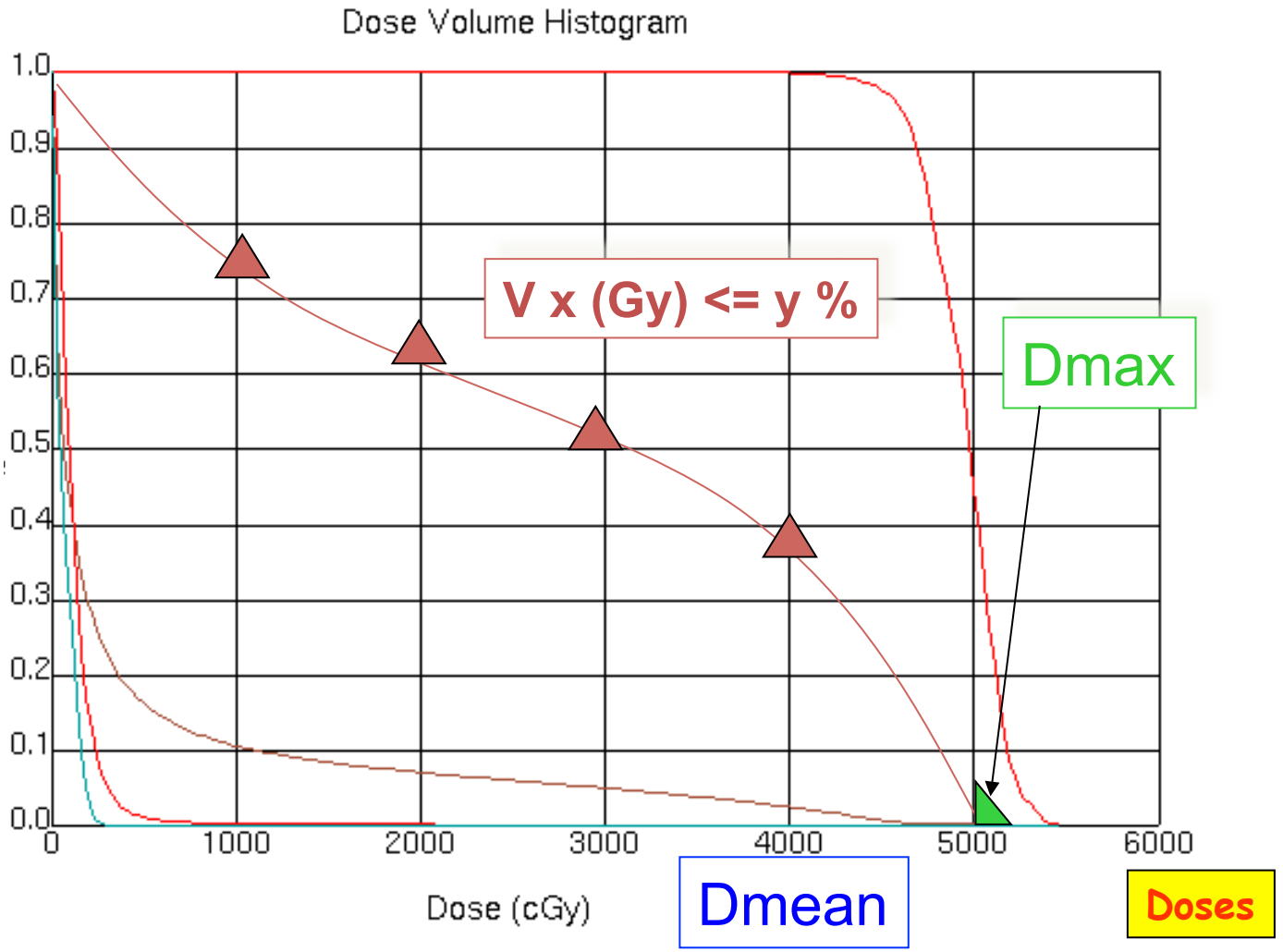
Lancet Oncol 2011; 12: 575–82

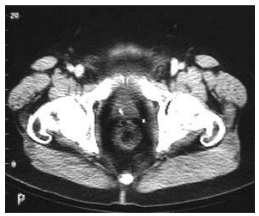
Critical organs in rectal cancer RT

- **Bowel:** small bowel, colon, rectum, anal canal
- **Urinary system:** uretheres, urinary bladder, urethra
- **Others:** genitalia, bones, nerves, veins/arteries, muscles, bone marrow

OARs

DVH





RTOG
RADIATION THERAPY ONCOLOGY GROUP

Pergamon

Int. J. Radiation Oncology Biol. Phys., Vol. 31, No. 5, pp. 1341–1346, 1995

0360-3016/95 $9.50 + .00

0360-3016(95)00060-7

● *Editorial*

E RADIATION THERAPY ONCOLOGY GROUP
AN ORGANIZATION FOR RESEARCH AND
NT OF CANCER (EORTC)

NN STETZ, B.S.[2] AND THOMAS F. PAJAK, PH.D.[2]

Pergamon

Int. J. Radiation Oncology Biol. Phys., Vol. 31, No. 5, 1049–1091, 1995

0360-3016/95 $9.50 + .00

0360-3016(95)00075-5

LENT SOMA SCALES FOR ALL ANATOMIC SITES

National Cancer Institute — U.S. National Institutes of Health | www.cancer.gov

Common Terminology Criteria for Adverse Events CTC AE v3.0 (2006) o CTC AE v4.02 (2009)

GASTROINTESTINAL

		Grade				
Adverse Event	**Short Name**	**1**	**2**	**3**	**4**	**5**
Ileus, GI (functional obstruction of bowel, i.e., neuroconstipation)	Ileus	Asymptomatic, radiographic findings only	Symptomatic; altered GI function (e.g., altered dietary habits); IV fluids indicated <24 hrs	Symptomatic and severely altered GI function; IV fluids, tube feeding, or TPN indicated ≥24 hrs	Life-threatening consequences	Death
REMARK: Ileus, GI is to be used for altered upper or lower GI function (e.g., delayed gastric or colonic emptying).						
ALSO CONSIDER: Constipation; Nausea; Obstruction, GI – *Select*; Vomiting.						
Incontinence, anal	Incontinence, anal	Occasional use of pads required	Daily use of pads required	Interfering with ADL; operative intervention indicated	Permanent bowel diversion indicated	Death
REMARK: Incontinence, anal is to be used for loss of sphincter control as sequelae of operative or therapeutic intervention.						
Leak (including anastomotic), GI – *Select*: – Biliary tree – Esophagus – Large bowel – Leak NOS – Pancreas – Pharynx – Rectum – Small bowel – Stoma – Stomach	Leak, GI – *Select*	Asymptomatic radiographic findings only	Symptomatic; medical intervention indicated	Symptomatic and interfering with GI function; invasive or endoscopic intervention indicated	Life-threatening consequences	Death
REMARK: Leak (including anasomotic), GI – *Select* is to be used for clinical signs/symptoms or radiographic confirmation of anastomotic or conduit leak (e.g., biliary, esophageal, intestinal, pancreatic, pharyngeal, rectal), but without development of fistula.						
Malabsorption	Malabsorption	—	Altered diet; oral therapies indicated (e.g., enzymes, medications, dietary supplements)	Inability to aliment adequately via GI tract (i.e., TPN indicated)	Life-threatening consequences	Death

From Emami (1991)
to QUANTEC (2009)

INTERNATIONAL JOURNAL OF Radiation Oncology BIOLOGY·PHYSICS
Official Journal of the American Society for Radiation Oncology — ASTRO

S. FILIPPO NERI HOSPITAL EXPERIENCE

Pts *"unfit"*

- Jan 2009 - Jan 2012: 33 pts
  (4 nineties)

- All were staged with digital exam, colonoscopy, TB CT scan, pelvic MRI and EUS

- All of them were followed for evaluating the therapeutic effect and tolerance

- In the follow up the same exams were performed according to an established schedule

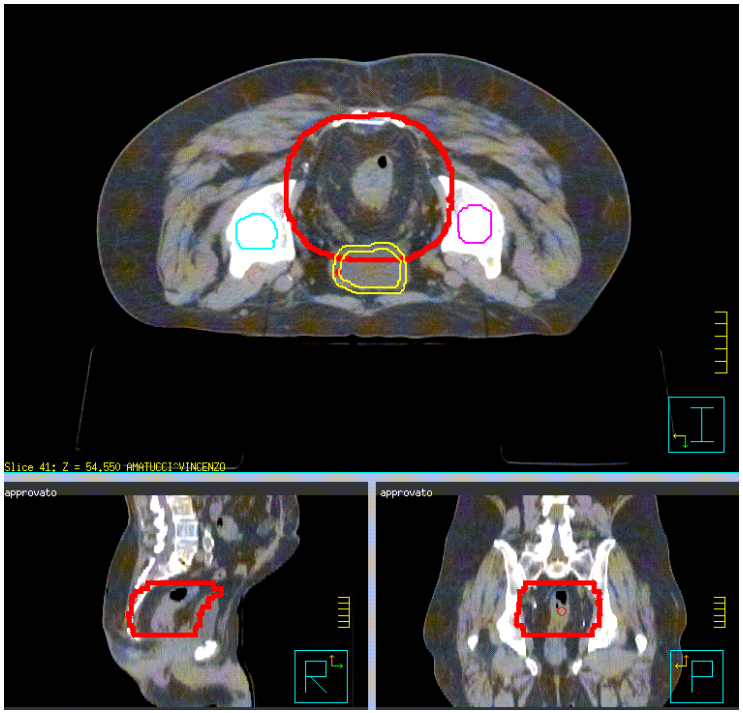
- Toxicity was valuated according EORTC/RTOG criteria

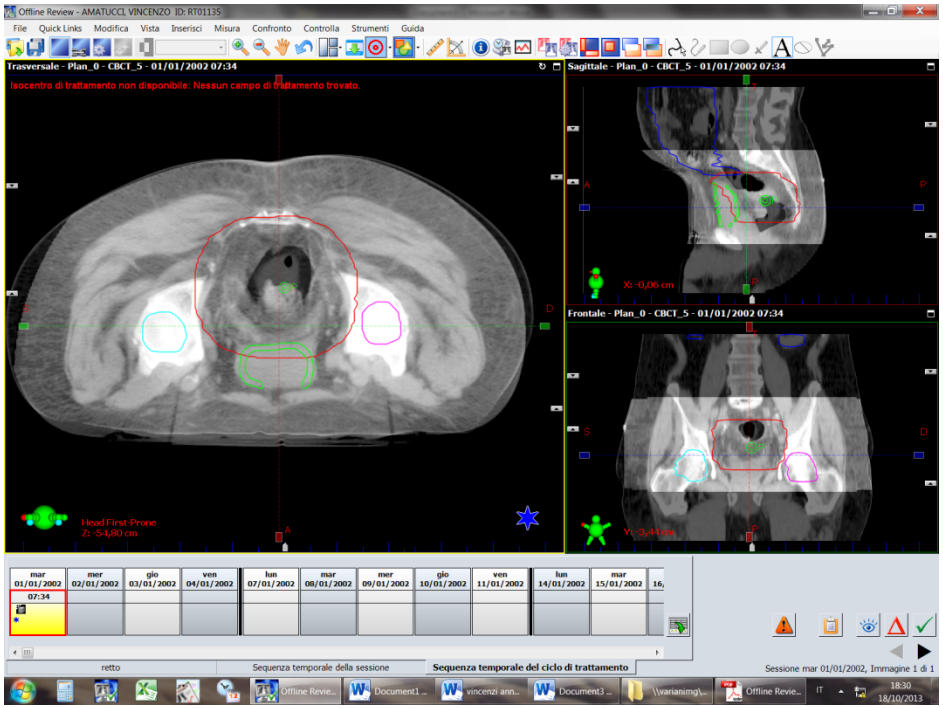
PATIENT'S CHARACTERISTICS

Gender	**M: 21 F:12**		
Age	Median: 65,2 (33-94)		
KPS	≥ 70		
Initial Stage	**22 T3/4 N+, 11 LR**		
Histology	ADK		
Contraindication for advanced age	9		
Contraindication for co-morbidities	12		
Contraindication for synchronous metastasis	12		
Contraindication for previous LCRC	11		
Dose	25 Gy/5 fr in one week		
Pain)	19		
Bleeding	13		
Chemotherapy	Pre-RT 0	RT – Surgery 3	Post-Surgery 9

TARGET

The target included the macroscopic disease (CTV: T + locoregional N + mesorectum) with a radial safety margin of 2 cm (PTV)





EARLY RESULTS

All patients completed the planned treatment without interruption and presented an immediate benefit within the first 2 weeks after the end of it

13/13 bleeding
16/19 pain

SURGERY

DELAYED SURGERY	17/33
RA	7 (+ 1 TRANS-.ANAL RES.)
TME	ALL
R0	10

16 pts:

6 refused surgery

4 medical contraindications to surgery

6 multiple distant metastasis

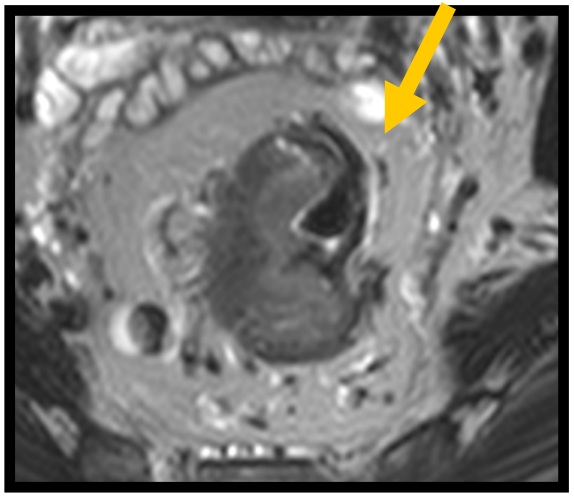
PATHOLOGY

A downstaging was observed in 13/17 pts (76,4%)

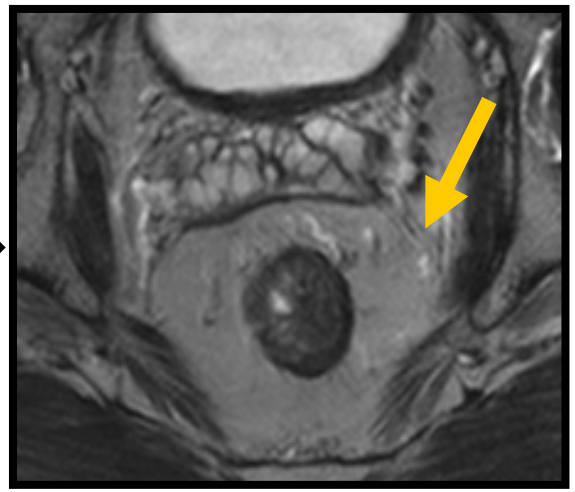
4 pts Complete Response

3 after surgery, one without (> 90 ys)

Pre-RT



Post-RT



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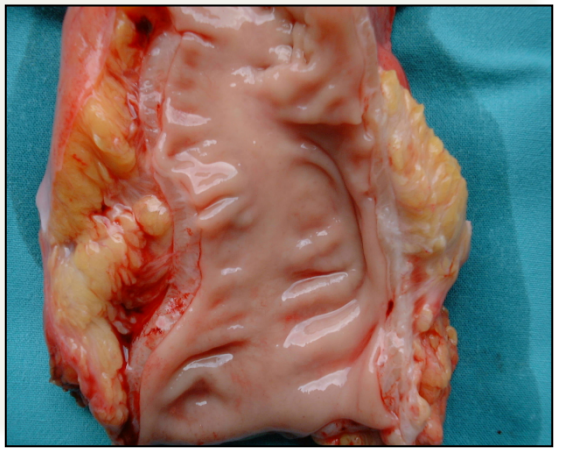


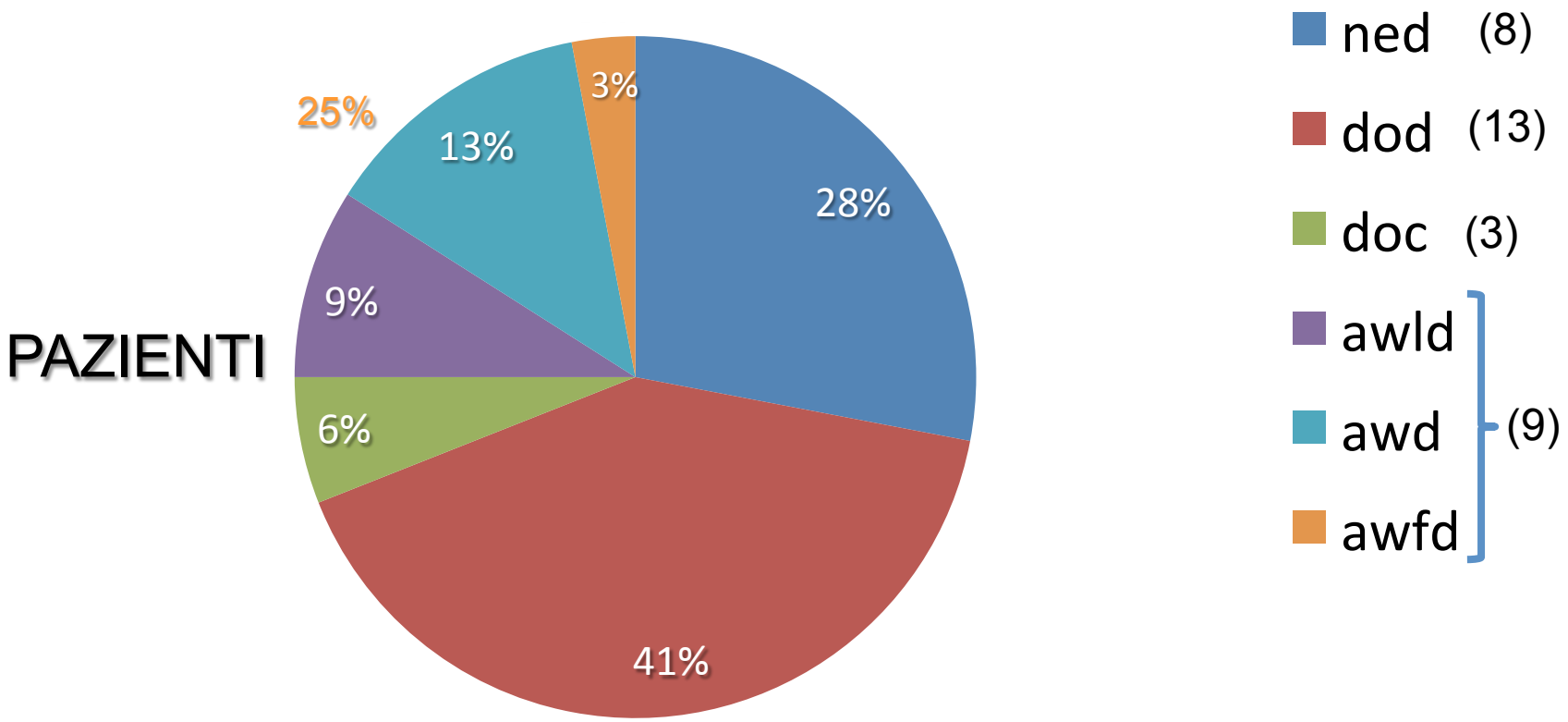
TOXICITY

- ✓ ACUTE TOX:
  - 5 G3 diarrhea (elderly patients)
  - 7 G2 tenesmus
  - 7 disuria
- ✓ LATE TOX:
  - 3 disuria
  - 1 tenesmus
  - 1 rectal bleeding (re-treated)

- ✓ No postoperative deaths or major complications

RESULTS

Median FUP 27,4 mts (range 4-41)



CONCLUSIONS

- The SCRT treatment followed by delayed surgery is a well tolerated approach in patients not eligible for standard long course.

- In advanced local stage and/or *"UNFIT"* patients this treatment has considerable anti-tumor activity and can result in radical surgery without major complications.

Faith Versus Facts