Timing and Extension of Amputation In Anal Carcinoma

Coloproctology, Bern Jan 22, 2011

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Terminology: anal canal cancer

Epidermoid

- **Below dentate line**
  - ➢squamous CC
- **At and above dentate line**
  - ➢« basaloid », « cloacogenic », or « transitional »
  - = non keratinizing types of squamous cell carcinoma

same ttt

Terminology: Anal margin cancer

Anal <u>margin</u> cancer ≠ Anal <u>canal</u> cancer

Other histology

- – Adenocarcinoma (= rectum cancer)
- – Melanoma,
- – Lymphoma
- – Merkel carcinoma
- – Sarcoma

other ttt

Anal Cancer Prognosis
(Multi-modal treatment +/- surgery)

<u>Stage :</u>	<u>5 year overal survival:</u>
• **T1: (≤2cm)**	**68.5%**
• **T2: (2-5 cm)**	**58.9%**
• **T3: (>5 cm)**	**43.1%**
• **T4: (adj. organ invasion)**	**34.3%**

Bilimoria KY, Bentrem DJ, Rock CE, Stewart AK, Ko CY, Halverson A. Outcomes and prognostic factors for squamous cell carcinoma of the anal canal: analysis of patients from the National Cancer Database. Dis Colon Rectum 2009;52:624-31

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• T4: (adj. organ invasion)	34.3%
• **N0:**	**62.9%**
• **N+:**	**37.4%**
• **M0:**	**59.4%**
• **M+:**	**18.7%**

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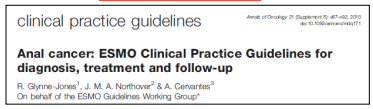
Treatment



clinical practice guidelines

Anal cancer: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up

R. Glynne-Jones[1], J. M. A. Northover[2] & A. Cervantes[3]
On behalf of the ESMO Guidelines Working Group*

- Anal Margin T1 No : **Primary surgery**
  (≠ anal canal)
- All other: **Chemoradiation**
  - – 45-50 Gy during 5 weeks, including inguinal areas
  - – Combined with 5-FU and Mitomycin C during week 1 and 5

Assessment of response to Chemoradiation

- **First assessment at 6-8 weeks**
  - **Clinical (DRE, inguinal), (+/- biopsies: controversial)**
  - **PET CT: predicts long term outcome**
  - **MRI: tends to overestimate disease**

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➢ **60-85%: complete clinical response (CR)**

➢ **5-30%: >50% CR: follow*, +/- boost crxtt**

➢ **≈10%: <50% CR: immediate salvage surgery**

(*SCC continue to decrease in size for 3 to 12 weeks following therapy)

Indications to surgery: local failure of (chemo-)radiation

A. **progression or <50% response at 6-8 weeks**
B. **residual disease at final assessment and after boost/ salvage radiation**
C. **recurrence after initial complete clinical response**

Renehan AG et al., BJS 2004

Indications to surgery: local failure of (chemo-)radiation

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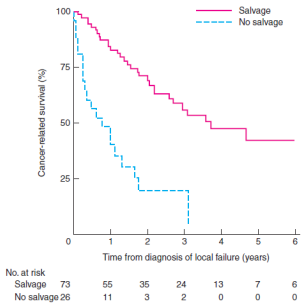
Table 4 Pathways to local disease failure and proportions salvaged

	Radiotherapy alone			Chemoradiotherapy		
	n	LDF*	Salvaged†	*n*	LDF*	Salvaged†
All patients	127	60 (47·2)	44 (73)	127	39 (30·7)	29 (74)
Initial treatment response						
Complete response, no booster	7	0	–	7	0	–
Complete response, after booster	89	29	24	104	23	19
Incomplete response, after booster	18	18	13	10	10	7
Partial response -< 50% or progression, before booster	13	13	7	6	6	3

Values in parentheses are percentages of *number of patients treated and †local disease failures (LDFs).

Renehan AG et al., BJS 2004

Salvage surgery & survival



Renehan AG et al., BJS 2004

Salvage surgery & survival

Table 5 Surgical treatment of local residual or recurrent disease and other failures

	Total (*n* = 254)	Radiotherapy (*n* = 127)	Chemoradiotherapy (*n* = 127)
Residual or recurrent local disease			
APR*	67	41	26
Total pelvic clearance	3	1	2
Local excision	3	2†	1
Palliative care for local disease failure			
Colostomy only	2	2	0
No surgery	24	14‡	10
Other major operation			
APR for treatment-related complications	3§	3	0
Negative laparotomy (suspicion of recurrence)	1	1	0
Failure to close pretreatment colostomy	7	2	5
Total no. of colostomies	84 (33·1)	50 (39·4)	33 (26·0)
Total failure (disease and other)	110 (43·3)	66 (52·0)	44 (34·6)

Renehan AG et al., BJS 2004

Outcomes of salvage surgery

Author, year, institution	Curative, *n*	Interval	Median OS (months)	5-year OS (%)
Renehan[20], 2005, Manchester	73	1988–2000	42	40
Akbari[13], 2004, MSKCC	47	1980–2001	49	40
Schiller, 2007, Toronto	40	1988–2006	41	39
Ghouti[26], 2005, Marseille	36	1987–2002	–	69
Nilsson[17], 2002, Stockholm	35	1985–2000	–	52
Ferenschild[16], 2005*, Rotterdam	18	1985–2000	27	30
Bai[27], 2004, Beijing	16	1978–1994	16	–
Papaconstantinou[25], 2006, Minnesota	15	1992–2002	–	–
Van der Wal[19], 2001, Johns Hopkins	13	1980–1998	33	47

*Included SCC and adenocarcinoma.

Schiller D et al (Toronto), Ann Surg Oncol 2007

Predictors of successful salvage

	n	Postsalvage survival at 3 years (%)*	*P*‡
Resection margins positive			
No	55	61·4 (44·8, 74·3)	
Yes	7	0	0·008
Type of disease failure			
Residual (≤ 3 months)	12	30·9 (5·1, 63·0)	
Recurrent (> 3 months)	61	59·1 (43·6, 71·7)	0·023
Nodal involvement			
No	52	59·1 (42·1, 72·6)	
Yes	10	31·8 (4·9, 64·7)	0·070

Renehan AG et al.(NHS UK), BJS 2004
Akbari R et al. (MSKCC) , DCR 2004
Schiller D et al (Toronto), Ann Surg Oncol 2007

Predictors of successful salvage

- **R0**
- **Recurrent > residual**
- **N0**
- **Female gender**
- **Low Charlson comorbidity score**
- **Size of resected tumor <4cm**

Renehan AG et al.(NHS UK), BJS 2004
Akbari R et al. (MSKCC) , DCR 2004
Schiller D et al (Toronto), Ann Surg Oncol 2007

Original article

Patterns of local disease failure and outcome after salvage surgery in patients with anal cancer

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Diseases of the Colon & Rectum

Oncologic Outcomes of Salvage Surgery for Epidermoid Carcinoma of the Anus Initially Managed With Combined Modality Therapy

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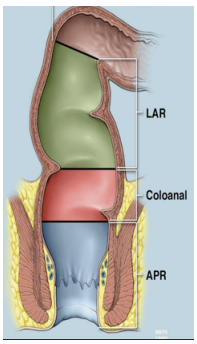
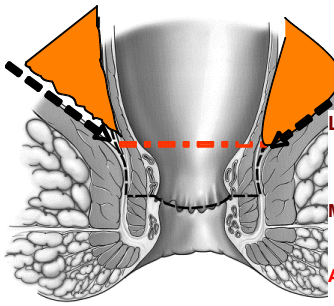
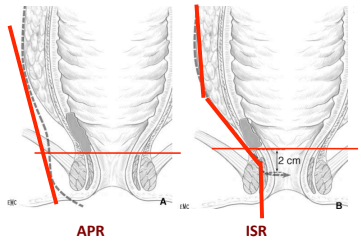
Surgical Strategy for APR



"UltraLow" / Transsphincteric / APR



Dissection Plane APR / ISR



Importance in Laparoscopic Approach !

Rullier E Ann Chir 2002; 127: 88-94

Surgery 2011 for Anal Cancer

TME: Total Mesorectal Excision

APR: Abdomino Perineal Resection

Total Mesorectal Exision

The 'Holy Plane' of rectal surgery

Richard John "Bill" Heald

"The Pope"

Heald RJ J R Soc Med 1988; 81:503–508

Laparoscopic Aproach

Anatomical landmarks

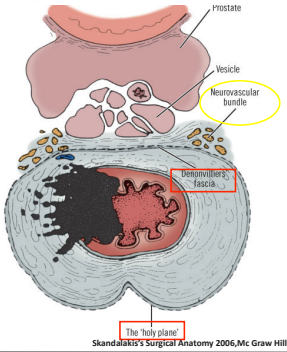
- Presacral plane
- Hypogastric nerves
- Denonvilliers fascia & Prostate
- Seminal vesicles
- Pelvic plexus
- Levator ani muscles

Laparoscopic Rectum Surgery: Surgical anatomy

- Double fascia of Denonvilliers
  - Anterior leaflet of the fascia is related to the prostate
  - Posterior leaflet is related to the rectum
- Space of Proust between anterior and posterior leaflet
- "It is not always easy to find the passage between wind and water"

Healey JE Jr, Hodge J. Surgical Anatomy (2nd ed). Toronto: BC Decker, 1990, p. 262.

Surgical anatomy



Skandalakis's Surgical Anatomy 2006,Mc Graw Hill's Access Surgery

Laparoscopic Rectum Surgery Surgical anatomy

Denonvilliers

Charles-Pierre

French anatomist and surgeon

Paris 1808-1872

Closure or tissue transfer?

- Perineal Wound Complication (23% - 80%)
- Risk factors
  - Diabetes, obesity, smoke
  - **Radiotherapy** :

    Wound complication: ⇧ From 23% to 47%

Wiatrek, , Clin colon rectal Surg, 2008, 21:76-85
Bullard, Dis Colon rectum 2005, 48:438-43
Khoo, Surgery 2001, 130:463-9

Closure or tissue transfer?

	Primary	Flap
• Pelvic abcess	46%	12%
• Primary wound healing	33%	63%

Wiatrek, , Clin colon rectal Surg, 2008, 21:76-85
Bullard, Dis Colon rectum 2005, 48:438-43
Khoo, Surgery 2001, 130:463-9

Timing and extension of surgery for Anal cancer

1) Chemo radiation
2) Assesment of response 6-8 Weeks
3) Salvage : laparoscopic APR
4) Resection of levator Ani
5) Flap / Primary closure