CONVEGNO NAZIONALE

GISCoR

Gruppo Italiano Screening ColoRettale

Mantova

8-9 Novembre 2012

Sono necessarie le colorectal unit?

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AZIENDA OSPEDALIERA "CARLO POMA" MANTOVA

Definizione

Modello organizzativo all'interno di un dipartimento chirurgico formato da personale medico ed infermieristico dedicato alla patologia colorettale che lavora coadiuvato da un equipe multidisciplinare

Patologia afferente

- Polipi e cancro colorettale
- Rettocolite ulcerosa, morbo di Crohn
- Malattia diverticolare
- Patologia del pavimento pelvico
- Emorroidi, ragadi, fistole
- Stoma care

Colorectal unit: requisiti organizzativi

- Team multidisciplinare: MDT
- Surgeon case volume
- Surgeon specialization
- Hospital volume

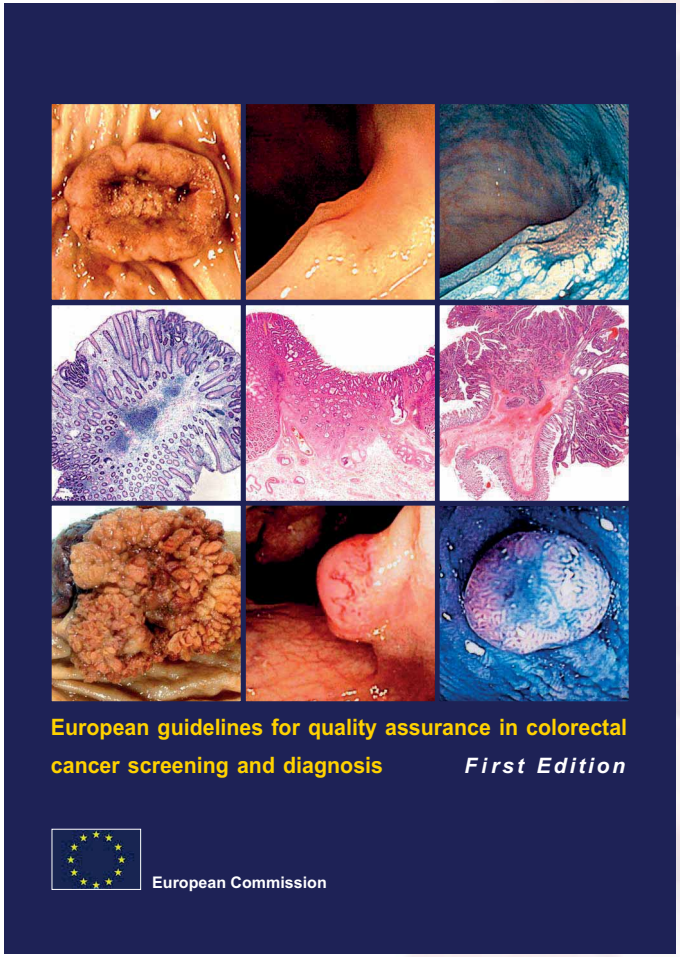
Approccio multidisciplinare

Consente di disegnare strategie condivise ed efficienti capaci di guidare il paziente nel percorso che dalla diagnosi attraverso la terapia porta alla guarigione

Team multidisciplinare: MDT

Colorectal Cancer Surgery ACPGBI Advisory 2012

Approccio multidisciplinare



- **6.2 General requirements**

  The evidence that Multidisciplinary Teams (MDTs) improve outcomes for cancer patients is still scanty, but beginning to accumulate (Fleissig et al. 2006). However, there is general agreement that multidis- ciplinary services provide better patient care for a variety of conditions and in colorectal cancer, multidisciplinary management is strongly recommended (NHS Executive 2004).

Surgeon case volume

Numero di procedure annue effettuate dal chirurgo come primo operatore

[Intervention Review]

Workload and surgeon's specialty for outcome after colorectal cancer surgery

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Cochrane Database Syst Rev 2012

AUTHORS' CONCLUSIONS

Implications for practice

Although there was substantial heterogeneity between the individual studies that were included in this review and meta-analysis, the presented results confirm clearly the presence of a volume-outcome relationship in modern colorectal cancer surgery, for both the hospital and the individual surgeon. Specialists also achieved generally better outcomes than non-specialists, although the large variability in the definition of the colorectal specialist reduces the applicability of this concept substantially. Nonetheless, if the difference in the definition is considered largely to be semantic, and one accepts the common-sense assumption that colorectal specialists, under normal circumstances, perform a comparatively high number of colorectal cancer operations, the evidence for the benefits of surgeon specialisation and higher surgeon volume are somewhat mutually supportive.

The volume-outcome relationship appears somewhat stronger for the individual surgeon than for the hospital; it was more consistent and it's effect size generally larger. Particularly for the primary outcomes of 5-year survival and operative mortality, there

Archampong D. Cochrane Database Syst Rev 2012

J Gastrointest Surg (2011) 15:541–550
DOI 10.1007/s11605-011-1433-x

2010 SSAT POSTER PRESENTATION

Elective Resection of Colon Cancer by High-Volume Surgeons Is Associated with Decreased Morbidity and Mortality

Sebastien Drolet · Anthony R. MacLean · Robert P. Myers · Abdel Aziz M. Shaheen · Elijah Dixon · W. Donald Buie

	Total	Low	Medium	High
Surgeons				
Definition of group (cases per year)	–	≤4	5–9	≥10
No. of surgeons	7,313	4,952 (68%)	1,676 (23%)	685 (9%)
No. of cases	54,000	16,379 (30%)	20,533 (38%)	17,088 (32%)
Mean annual case volume	–	2.1	6.4	15.2
Hospitals				
Definition of group (cases per year)	–	≤30	31–60	≥61
No. of hospitals	1,398	1,021 (73%)	261 (19%)	116 (8%)
No. of cases	54,000	17,962 (33%)	18,406 (34%)	17,632 (33%)
Mean annual case volume	–	10.7	43.0	90.2

Table 3 Summary of the crude and case mix-adjusted outcomes by volume groups

Characteristics	Total	Surgeon volume group[a]			Hospital volume group[b]		
		Low	Medium	High	Low	Medium	High
Mortality							
Crude % (95%CI)	3.1 (3.0–3.3)	3.9 (3.6–4.3)	3.0 (2.7–3.2)	2.6* (2.3–2.8)	3.6 (3.3–3.9)	3.2 (2.9–3.5)	2.6* (2.4–2.9)
Adjusted odds ratio (95% CI)		1.00 Ref	0.81*** (0.73–0.90)	0.75*** (0.65–0.86)	1.00 Ref	1.01 (0.87–1.16)	0.87 (0.76–1.00)
Any complication							
Crude % (95% CI)	33.6 (32.9–34.2)	36.1 (35.2–37.0)	33.1 (32.2–34.0)	31.7* (30.6–32.9)	33.1 (32.1–34.0)	34.6 (33.5–35.7)	33.0** (31.7–34.3)
Adjusted odds ratio (95% CI)		1.00 Ref	0.91*** (0.85–0.96)	0.91*** (0.85–0.97)	1.00 Ref	1.11*** (1.04–1.18)	1.09 (1.09–1.18)
Length of stay							
Crude (days) (95% CI)	7.0 (4.9–11.0)	7.7 (5.3–12.1)	6.9 (5.0–10.9)	6.5* (4.5–10.0)	7.3 (5.2–11.2)	7.0 (4.9–11.2)	6.6* (4.6–10.5)
Adjusted % change (95% CI)		Ref	−4.9%*** (−6.8, −3.0)	−3.0% (−6.8, 1.0)	Ref	3.0% (1.0, 6.2)	3.0% (−1.0, 6.2)
Charges							
Crude ($)	38,116	40,904	36,835	37,379*	36,576	39,145	38,471*
Adjusted % change (95% CI)		Ref	−8.6%*** (−10.4, −5.8)	−7.7%*** (−10.4, −3.9)	Ref	9.4% (1.0, 17.4)	10.5%*** (2.0, 19.7)

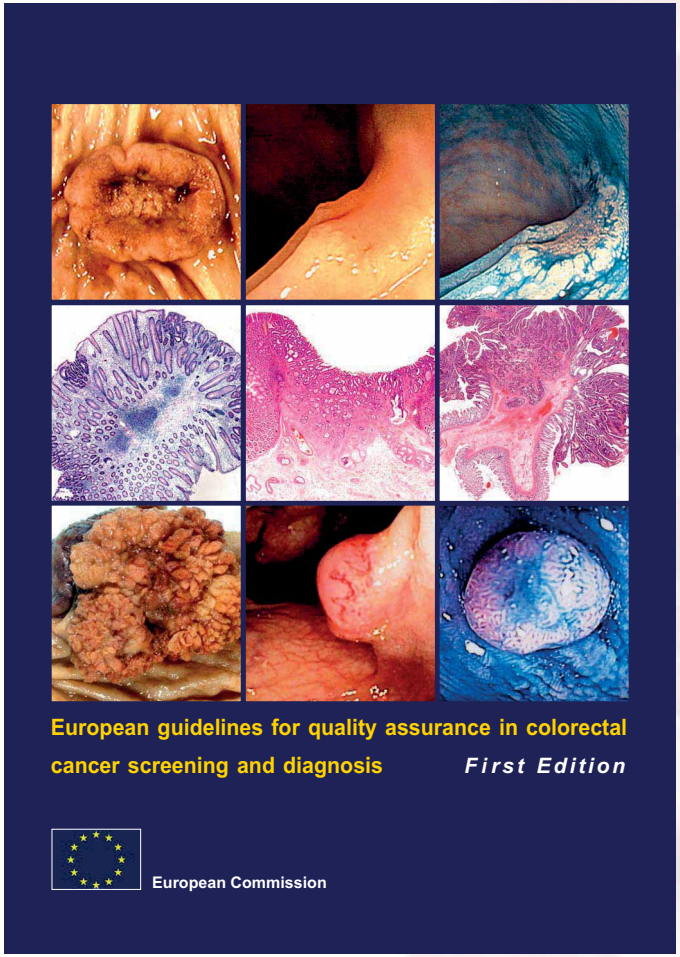
*$p<0.0001$; **$p=0.08$; ***statistically significant

[a] Adjusted for hospital volume

[b] Adjusted for surgeon volume

Drolet S. J Gastrointest Surg 2011

Surgeon case volume



- **Surgeons**
- All surgeons treating patients with screen-detected disease should specialise (although not necessarily exclusively) in colorectal cancer surgery and should be able to demonstrate a high-volume practice

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Surgeon case volume

All Colorectal Cancer Surgery: The ACPGBI would expect the following of any surgeon managing elective cases of colorectal cancer. A. The Surgeon must be a Core member of the Colorectal Cancer MDT and have performed at least 20 curative resections for colorectal cancer in the previous year, which have been recorded by the MDT and been submitted to NBOCAP.

COLORECTAL CANCER SURGERY

STANDARDS ACPGBI ADVISORY 2012

Surgeon specialization

Percorso formativo certificato pluriennale

Italia

- Scuola di specializzazione in chirurgia generale
- Scuola di specializzazione in chirurgia gastroenterologica
- Master universitari ed organizzati da società scientifiche

Paesi anglosassoni

- Scuola di specializzazione in chirurgia colorettale
- Percorsi di training per MDT finanziati dall'NHS (Pelican MDT-TME development programme)

Taylor C. BMC Health Serv Res 2010

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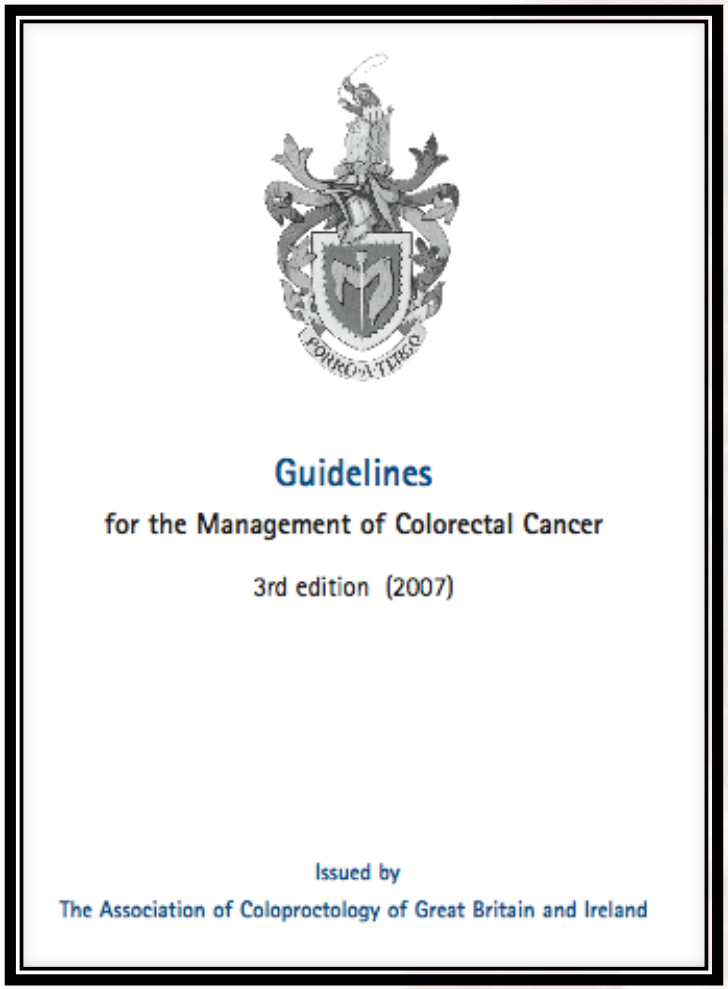
SICCR
Società Italiana di Chirurgia Colo-Rettale

Società Italiana Chirurgia Colorettale

Società scientifica dedicata al compito di promuovere e divulgare attività, studi, corsi e congressi nell'ambito della patologia colorettale

Surgeon specialization



- **Recommendations**
- **Surgery for colorectal cancer should only be carried out by surgeons with appropriate training and experience, working as part of a multidisciplinary team.**
- **Recommendation grade B**

Hospital (Unit) volume

Numero di interventi annui eseguiti dalla singola unità operativa

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Original article

Volume–outcome analysis of colorectal cancer-related outcomes

D. W. Borowski[1,4], D. M. Bradburn[2], S. J. Mills[2,4], B. Bharathan[1,4], R. G. Wilson[3], A. A. Ratcliffe[5] and S. B. Kelly[1] on behalf of the members of the Northern Region Colorectal Cancer Audit Group (NORCCAG)

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Table 6 Univariable and multivariable analysis of the effects of surgeon caseload and hospital volume on outcomes after surgery for rectal cancer: case mix-adjusted analysis including both surgeon and hospital volume

	Surgeon caseload				Hospital volume			
	Unadjusted		Adjusted		Unadjusted		Adjusted	
	*n**	*P*‡	Odds ratio†	*P*§	*n**	*P*‡	Odds ratio†	*P*§
R0 resection		0·027				0·345		
Low volume	645 (71·7)				640 (73·6)			
Medium volume	642 (72·1)				576 (70·7)			
High volume	644 (76·4)				715 (75·4)			
Restorative surgery (elective)		0·026				0·650		
Low volume	411 (62·4)				446 (65·1)			
Medium volume	489 (69·8)				437 (72·0)			
High volume	457 (68·2)				474 (64·3)			
Anastomotic leak		0·087				0·380		
Low volume	29 (5·8)		1·00		29 (5·5)		1·00	
Medium volume	29 (5·2)		0·94 (0·53, 1·67)	0·831	24 (4·6)		0·95 (0·53, 1·77)	0·831
High volume	18 (3·5)		0·61 (0·29, 1·29)	0·194	23 (4·4)		0·97 (0·48, 1·96)	0·936
Operative death		0·045				0·893		
Low volume	92 (9·3)		1·00		71 (7·5)		1·00	
Medium volume	55 (5·6)		0·61 (0·41, 0·88)	0·012	61 (6·8)		0·94 (0·63, 1·41)	0·766
High volume	64 (7·0)		0·79 (0·51, 1·25)	0·325	79 (7·6)		1·05 (0·67, 1·65)	0·835
Elective length of stay (days)		0·008				0·646		
Low volume	13·2				12·6			
Medium volume	12·7				12·7			
High volume	12·2				12·7			
5-year overall survival (%)		0·016				0·204		
Low volume	42·8		1·00		45·7		1·00	
Medium volume	46·6		0·90 (0·79, 1·02)	0·109	43·6		0·96 (0·83, 1·09)	0·505
High volume	48·6		0·99 (0·86, 1·16)	0·975	48·2		0·85 (0·73, 0·99)	0·036

British Journal of Surgery 2010

Table 5 Univariable and multivariable analysis of the effects of surgeon caseload and hospital volume on outcomes after surgery for colonic cancer: case mix-adjusted analysis including both surgeon and hospital volume

	Surgeon caseload				Hospital volume			
	Unadjusted		Adjusted		Unadjusted		Adjusted	
	*n**	*P*‡	Odds ratio†	*P*§	*n**	*P*‡	Odds ratio†	*P*§
R0 resection		< 0·001				0·131		
Low volume	959 (68·8)				1075 (72·1)			
Medium volume	1135 (75·1)				977 (72·3)			
High volume	1046 (75·0)				1088 (74·6)			
Restorative surgery (elective)		0·706				0·007		
Low volume	597 (97·7)				896 (98·0)			
Medium volume	999 (97·6)				793 (97·9)			
High volume	917 (97·4)				824 (96·5)			
Anastomotic leak		0·060				0·455		
Low volume	34 (2·7)		1·00		26 (1·8)		1·00	
Medium volume	31 (2·2)		1·03 (0·60, 1·75)	0·917	30 (2·4)		1·52 (0·88, 2·63)	0·134
High volume	21 (1·5)		0·66 (0·36, 1·20)	0·175	30 (2·2)		1·44 (0·80, 2·60)	0·220
Operative death		< 0·001				0·655		
Low volume	177 (12·1)		1·00		126 (8·1)		1·00	
Medium volume	119 (7·6)		0·89 (0·67, 1·18)	0·405	115 (8·2)		1·11 (0·82, 1·49)	0·508
High volume	75 (5·2)		0·60 (0·43, 0·83)	0·002	130 (8·6)		1·29 (0·95, 1·76)	0·105
Elective length of stay (days)		0·885				0·974		
Low volume	10·8				10·9			
Medium volume	10·9				10·7			
High volume	10·8				10·9			
5-year overall survival (%)		< 0·001				0·936		
Low volume	39·3		1·00		47·8		1·00	
Medium volume	50·1		0·93 (0·84, 1·03)	0·176	47·4		1·00 (0·90, 1·11)	0·969
High volume	52·5		0·84 (0·76, 0·94)	0·003	46·8		1·09 (0·98, 1·22)	0·120

Borowsky D. British Journal of Surgery 2010

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Take home messages

- Requisiti organizzativi sono fondamentali per istituire una colorectal unit
- Centralizzare?
- Delocalizzare all'interno di una rete oncologica regionale?

Prospettive future

- Allo stato attuale il dibattito è ancora aperto
- Sono necessarie scelte di politica sanitaria adeguate per ottimizzare la qualità della prestazione.

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