
Follow-up Regimen for Colon and Rectal Cancer

Dennis L. Rousseau Jr. M.D./Ph.D., FACS
Assistant Professor of Surgery
Division of Surgical Oncology
University of Texas Health Science Center
San Antonio

Colorectal Cancer

- 149,000 cases estimated for 2006
 - 3rd most common cancer of men and women
- 55,200 deaths in 2006
 - 2nd most common cause of cancer death in men
 - 3rd most common cause of cancer death in women
- Lifetime incidence in US
 - Men – 1 in 17
 - Women – 1 in 18

Colorectal Cancer

- 65 – 70% cases treated with curative resection
- 100,000 patients per year in need of follow-up
- Stage I patients
 - 10-15% of cases
 - >90% 5-year disease-free survival
 - Second primary lesion
- Stage II and Stage III patients

Stage II/III Recurrence: Clinical Trial Data

	Intergroup 0035	Intergroup 0089 ECOG patients	IKN Colon Trial Group	Intergroup 0114	Chau et al.
Total # patients	1247	1356	500	1695	530
Primary Tumor	Colon	Colon	Colon	Rectum	Colon/ Rectum
Stages included	II and III	II and III	III	II and III	II and III
Median F/U (Months)	84	43.6	43	106.8	68
Patients with recurrence (%)	44	31	42.6	42	29
Patients proceeding to curative resection (%)	19.9	22.8	19.7	23.9	21.4

Method of Recurrence Detection: Trial Patients Taken for Curative Resection for Recurrence

- CEA – 29%
- Symptoms – 26%
- Imaging – 24%
- Colonoscopy – 12%
- Others/Combination – 9%

Sites of Recurrent Disease

5-Year Recurrence by Site of Initial Tumor (%)

Site of Recurrence	Colon	Rectum
Liver	35	30
Lung	20	30
Peritoneal	20	20
Retroperitoneal	15	5
Peripheral Lymph Nodes	2	7
Other (Brain, Bone)	<5	<5
Loco-regional	15	35
Second colorectal cancer	3	3

Colorectal Cancer Follow-Up

- Appropriate Patients
 - Sufficient recurrence risk
 - Able to tolerate further therapy
- Appropriate Time-frame
 - Colon – 85% recurrence by 3 years, 100% by 5 years
 - Rectal – 90% recurrence by 5 years, 100% by 10 years

Colorectal Cancer Follow-Up

- Appropriate Studies
 - Clinical visits/exams
 - Laboratory Tests
 - Imaging
 - Endoscopy
- Cost Effective
- Improve Outcome
 - More patients for curative resection of recurrence
 - Improved survival from earlier initiation of palliative chemotherapy

Can Follow-up Improve Outcome: Meta-Analyses

Study	Trials	Pooled 5-Year Mortality Rate								Effect on 5-Year Mortality		
		Pooled # of Patients		Less Follow-up		More Follow-up		Absolute Risk Difference		95% CI	P	
		Less F/U	More F/U	%	# Patients	%	# Patients	%	95% CI			
Figueredo et al. 2003	6	821	858	37	306 of 821	30	260 of 858	7	3 to 12	RR = 0.80	0.70 to 0.91	0.0008
Renehan et al. 2002	5	676	666	37	247 of 666	30	197 of 676	7	2 to 12	RR = 0.81	0.70 to 0.94	0.007
Jeffery et al. 2002	5	676	666	37	247 of 666	30	197 of 676	7	2 to 12	OR = 0.67	0.53 to 0.84	

Meta-Analyses: Conclusions

- Intensive follow-up improves survival
- Intensive follow-up detects recurrence earlier
 - 8.5 months (95% CI 7.6 – 9.4)
- Effect on mortality most pronounced in trials using:
 - CT scanning
 - Frequent CEA measurements
- Incidence of intraluminal recurrence or metachronous cancer was low
 - 3.2% and 1.3% respectively

Follow-up

- Regular office visits/exams
- CEA measurements
- Imaging
- Endoscopy

Office Visits and Physical Exams

- Visits/exams every 3 months for 2 – 3 years, then every 6 months to 5 years
 - NCCN (2006) - every 3 months for 2 years, then every 6 months to 5 years
 - ESMO (2005) – Not specified
 - ASCRS (2004) – Reiterated NCCN, no specific comment
 - ASCO (2005) – every 3 – 6 months for 3 years, then every 6 months to 5 years

CEA Measurements

- CEA levels every 3 months for 2 – 3 years, then every 6 months to 5 years
 - For patients who are candidates for further therapy
 - NCCN – q 3 months for 2 years, then q 6 months to 5 years
 - ESMO – q 3-6 months for 3 years, then q 6 – 12 months to 5 years, if initially elevated
 - ASCRS – Reiterated NCCN, no specific comment
 - ASCO – q 3 months for at least 3 years
 - No additional labs – NCCN, ESMO, ASCRS, ASCO

Imaging

- CT scans of chest and abdomen yearly for 3 years, consider adding pelvic CT for rectal cancers
 - For patients who are operative candidates
 - NCCN – CT chest/abdomen/pelvis considered annually for 3 years in high risk patients (perineural, venous invasion, poor diff)
 - ESMO – U/S liver q 6 months for 3 years, then yearly to 5 years; CXR considered yearly for 5 years
 - ASCRS – CT scans not recommended, insufficient evidence for CXR
 - ASCO – Annual CT chest/abdomen for 3 years, consider pelvic CT for rectal cancer

Endoscopy

- Complete colonoscopy prior to resection or within 6 months after resection
- Colonoscopy 3 years after resection
 - Every 3 years until normal then every 3-5 years lifetime
 - NCCN – colonoscopy 1 year after resection, yearly if polyps removed, then every 2-3 years lifetime
 - ESMO – colonoscopy 1 year after resection, then every 3 years
 - ASCRS – colonoscopy every 3 years
 - ASCO – colonoscopy at 3 years, if normal, then every 5 years

Endoscopy

- Rectal Cancer
 - Individualize
 - No difference from colon cancer for patients treated with neoadjuvant chemoradiation and TME resection
 - If no radiation, consider anastomotic surveillance every 6 months for 2-5 years
 - NCCN – no difference from colon cancer
 - ESMO – rectosigmoidoscopy every 6 months for 2 years
 - ASCRS – Periodic anastomotic evaluation recommended
 - ASCO – Flexible sigmoidoscopy every 6 months for 5 years if no pelvic radiation

Other Tests

- Fecal Occult Blood Tests
- PET
- EUS
- Prognostic/predictive markers

Future Trials

- GILDA Trial – 1998
 - 2920 patients
- UK FACS Trial – 2003
 - 4890 patients

Questions?

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