

Oesophageal Cancer External Beam Radiotherapy Clinician Decision Tree. Updated March 2013

<b>Oesophageal Cancer</b>	Surgery <b>77% ECRIC</b>	No Radiotherapy	
	No surgery e.g.[cervical location], medically inoperable]] <b>23% ECRIC</b>	Radiotherapy	Radiotherapy Concurrent definitive chemo-radiotherapy <sup>1,4,8</sup> SCC <sup>7</sup> 66Gy 33#, 60 Gy/30#, 50.4 Gy/25-28# Adeno 50.4 Gy/25-28#
Stage I T1 N0 M0 ECRIC 10%	Surgery, definitive Chemo-radiotherapy Pre-op CRT and surgery	Surgery <b>85%</b>	Radiotherapy [RT] Adjuvant RT Adenocarcinoma 45 Gy/25#, 50 Gy/25# SCC <sup>7</sup> 50 Gy/25#, 60 Gy/30# Neoadjuvant RT <sup>3,7,8</sup> 45-50.4 Gy/25-30# Gy/25#
		No Surgery <b>15%</b>	No radiotherapy Radiotherapy Concurrent definitive chemo-radiotherapy <sup>8</sup> SCC 50 Gy/25-28#, 60 Gy/30# <sup>7</sup> Adeno 50.4 Gy/25-28# Palliative radiotherapy 35 Gy/15#, 30 Gy/10#, 20 Gy/5# If unfit chemo - ?radiotherapy only BSC
Stage II ECRIC 19%	Chemo radiotherapy +/- surgery	Suitable for Radical treatment <b>70%</b>	SCC 60 Gy/30# Adeno 50.4 Gy/25-28#, Neoadjuvant CRT <sup>3, 5,7,8</sup> 45-50 Gy/25-28#, 30 Gy/15# with CT Palliative radiotherapy 35 Gy /15#, 30 Gy/10#, 20 Gy/5# If unfit chemo-? RT only  <b>25%</b>
			Chemotherapy then surgery <b>75%</b>
			Not suitable for resection <b>30%</b> BSC <b>70%</b>
Stage III T1-2 N2 M0 T3 N1 M0 T4 any N M0 ECRIC 31%	Chemotherapy <b>66%</b>	Radiotherapy <b>30%</b>	Best supportive care 70 % XBRT 30%
			30 Gy/10#, 20 Gy/5#,rarely 8 Gy/1#
			30 Gy/10#, 20 Gy/5#,rarely 8 Gy/1#
Stage IV Any T any N M1 ECRIC 40%	No Chemotherapy <b>34%</b>	Radiotherapy <b>30%</b>	30 Gy/10#, 20 Gy/5#,rarely 8 Gy/1#
		No Radiotherapy <b>70%</b>	

Clinical estimates are in red

## **References**

1. Minsky BD, Pajak TF, Ginsberg RJ, Pisansky TM, Martenson J, Komaki R, Okawara G, Rosenthal SA, Kelsen DP. INT 0123 (Radiation Therapy Oncology Group 94-05) phase III trial of combined-modality therapy for esophageal cancer: high-dose versus standard-dose radiation therapy. *J Clin Oncol.* 2002 Mar 1;20(5):1167-74.
2. Stahl M, Stuschke M, Lehmann N, Meyer HJ, Walz MK, Seeber S, Klump B, Budach W, Teichmann R, Schmitt M, Schmitt G, Franke C, Wilke H. Chemoradiation with and without surgery in patients with locally advanced squamous cell carcinoma of the esophagus. *J Clin Oncol.* 2005 Apr 1;23(10):2310-7.
3. Gebski V, Burmeister B, Smithers BM, Foo K, Zalberg J, Simes J; Australasian Gastro-Intestinal Trials Group. Survival benefits from neoadjuvant chemoradiotherapy or chemotherapy in oesophageal carcinoma: a meta-analysis. *Lancet Oncol.* 2007 Mar;8(3):226-34.
4. Cooper JS, Guo MD, Herskovic A, Macdonald JS, Martenson JA Jr, Al-Sarraf M, Byhardt R, Russell AH, Beitler JJ, Spencer S, Asbell SO, Graham MV, Leichman LL. Chemoradiotherapy of locally advanced esophageal cancer: long-term follow-up of a prospective randomized trial (RTOG 85-01). Radiation Therapy Oncology Group. *JAMA.* 1999 May 5;281(17):1623-7.
5. Stahl M, Walz MK, Stuschke M, Lehmann N, Meyer HJ, Riera-Knorrenschild J, Langer P, Engenhart-Cabillic R, Bitzer M, Königsrainer A, Budach W, Wilke H. Phase III comparison of preoperative chemotherapy compared with chemoradiotherapy in patients with locally advanced adenocarcinoma of the esophagogastric junction. *J Clin Oncol.* 2009 Feb 20;27(6):851-6. Epub 2009 Jan 12.
6. Arnott SJ, Duncan W, Gignoux M, Girling D, Hansen H, Launois B, Nygaard K, Parmar MKB, Rousell A, Spiliopoulos G, Stewart L, Tierney J, Wang M, Rhugang Z. Oesophageal Cancer Collaborative Group. Preoperative radiotherapy for esophageal carcinoma. *Cochrane Database of Systematic Reviews* 2005, Issue 4. Art. No.: CD001799. DOI: 10.1002/14651858.CD001799.pub2.

## **Guidelines**

7. The Royal College of Radiologists. Radiotherapy dose-fractionation. The Royal College of Radiologists, London, 2006. <http://www.rcr.ac.uk/publications>
8. National Comprehensive Cancer Network®. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines™). Esophageal and Esophagogastric Junction Cancers (Excluding the proximal 5cm of the stomach) Version 1.2011 Updates. NCCN.org
9. Esophageal cancer: ESMO clinical recommendations for diagnosis, treatment and follow-up. Stahl M, Oliveira J; ESMO Guidelines Working Group. *Ann Oncol.* 2009 May;20 Suppl 4:32-3.
10. Delaney G, Barton M, Jacob S. Estimation of an optimal radiotherapy utilization rate for gastrointestinal carcinoma: a review of the evidence. *Cancer.* 2004 Aug 15;101(4):657-70.