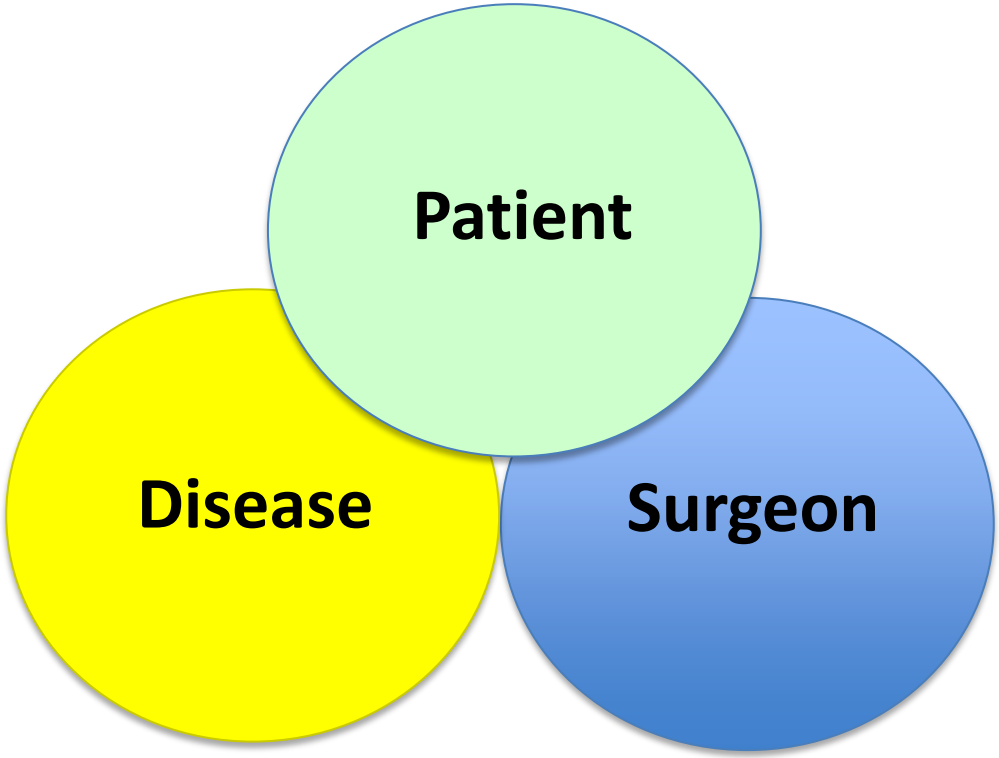
Which patients with esophageal cancer should not be operated?

George Hanna PhD, FRCS
Head of Division of Surgery
Imperial College London

Decision to operate



Patient

Severe co-morbidity

Marginal fitness

Clear decision

Pre-op optimisation

Enhanced recovery

Personalised multi-modal pre-habilitation

P R E P A R E

PHYSICAL ACTIVITY

RESPIRATORY EXERCISES

EAT WELL

PSYCHOLOGICAL WELLBEING

ASK ABOUT MEDICATIONS

REMOVE BAD HABITS

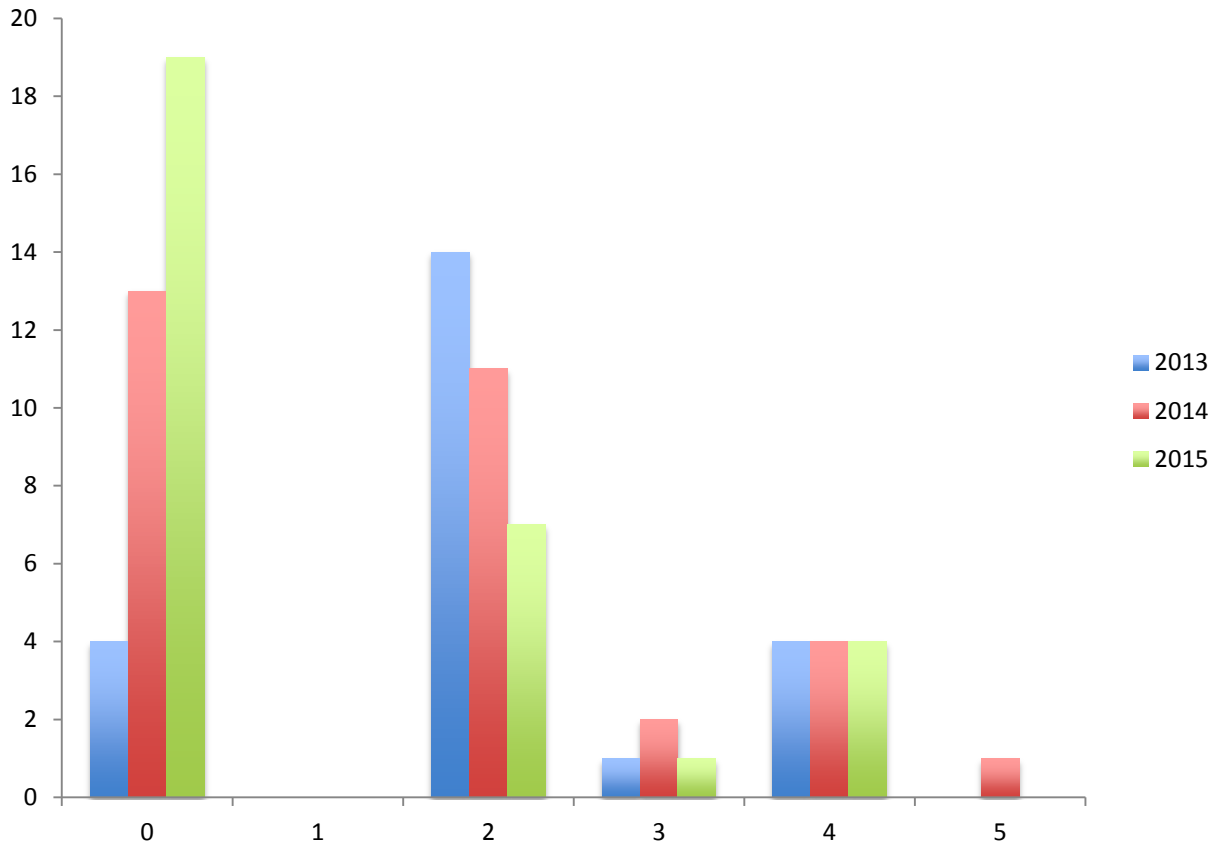
ENHANCED RECOVERY

NHS National Institute for Health Research CLAHRC

Imperial College London

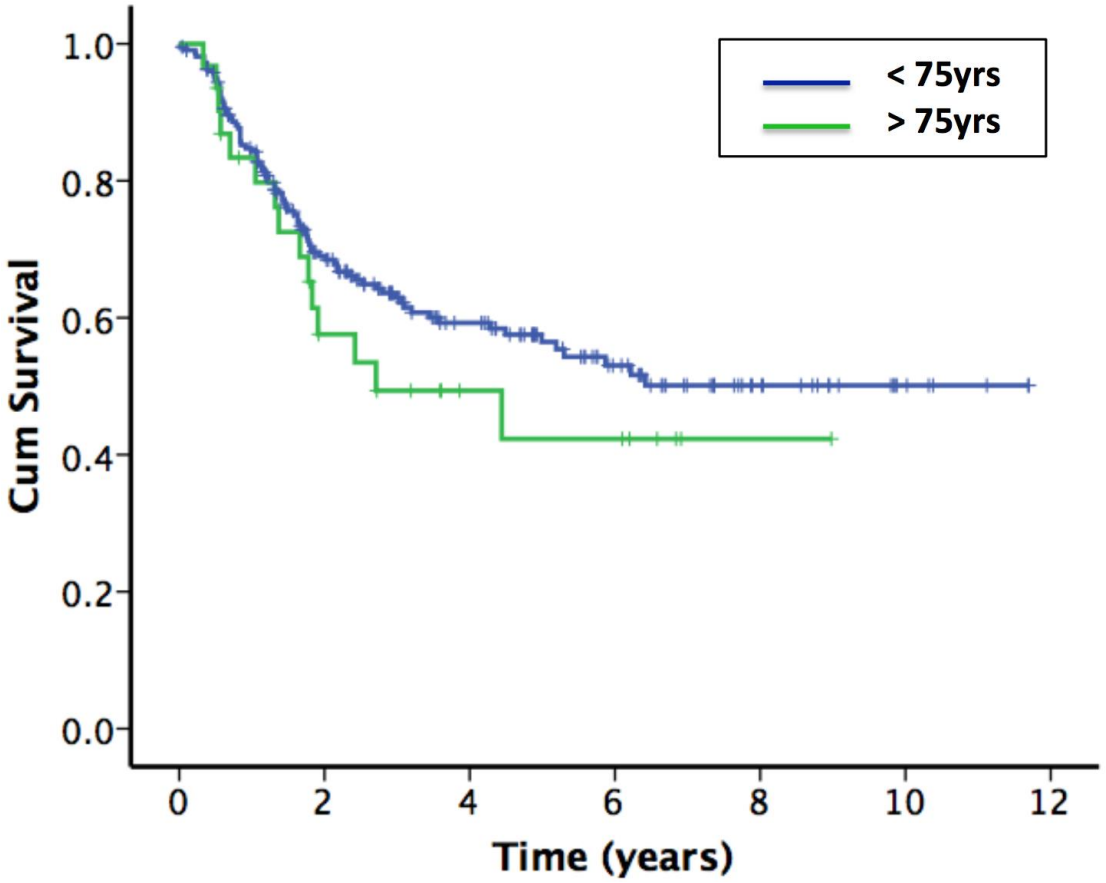
Imperial College Healthcare Charity

PREPARE programme



Post-op complications (Clavien-Dindo)

Age



Imperial College London

Metastatic disease

No role for palliative oesophagectomy

- Distant organs metastasis
- Peritoneal disease
- Metastatic cervical, para-aortic lymph nodes

Yes regional LN: coeliac, along recurrent nerves

T4b disease

No advantage for incomplete resection

- **Airways**
- **Aorta**
- **Invasion of recurrent laryngeal nerves**

Yes T4a: pleura, diaphragm, pericardium, limited lung resection

M1, T4b disease

- No survival advantage for surgery
- Surgery compromises quality of life
- Superior options
  - Stents for dysphagia
  - Pain management
- Role for palliative oncological therapies

Early, T1a disease

Endoscopic resection

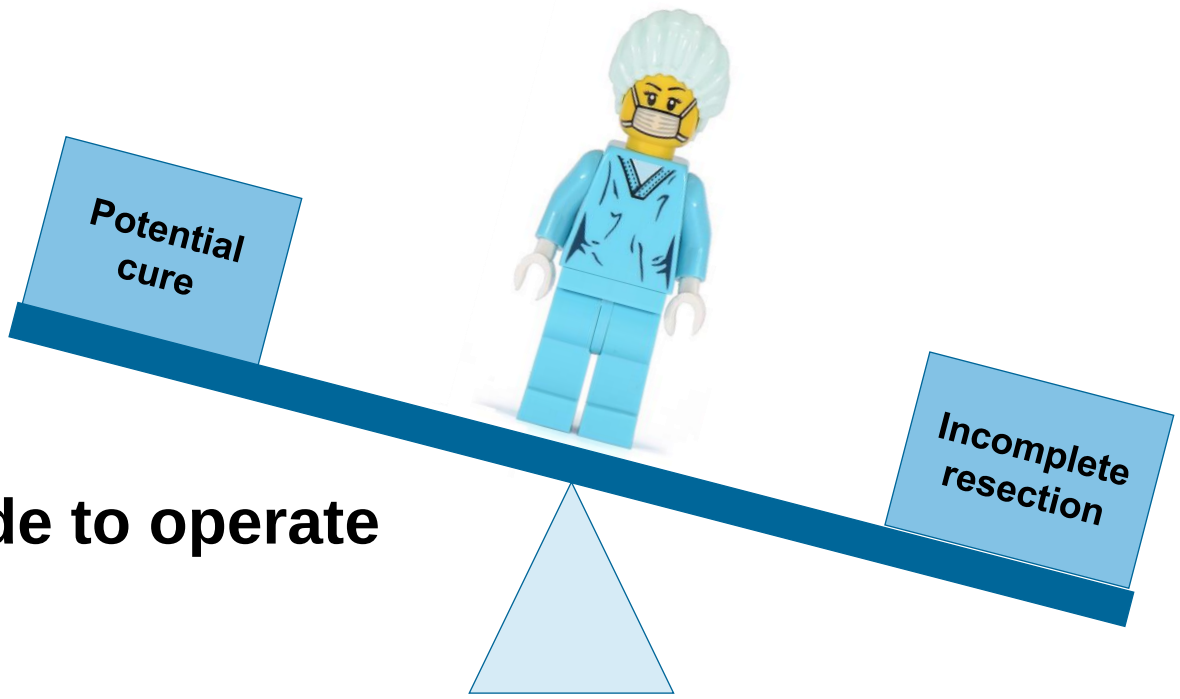
- Low incidence of LN involvement
- Can achieve complete resection
- No long term post-oesophagectomy symptoms
- Preserve quality of life

Upper oesophageal squamous cell carcinoma

- Superior outcomes of radical chemo-radiotherapy compared to surgery

Yes: salvage oesophagectomy in selected cases for small residual disease

Surgical strategy



Decide to operate

Should not operate

Assessment of the quality of surgery within randomised controlled trials for the treatment of gastro-oesophageal cancer: a systematic review

Sheraz R Markar, Tom Wiggins, Melody Ni, Ewout W Steyerberg, J Jan B Van Lanschot, Mitsuru Sasako, George B Hanna

- **33 RCTs - 7045 patients**
- **Investigated whether standarisation of surgical techniques reduces the variation in lymph node harvest, in-hospital mortality and loco-regional cancer recurrence**

Lancet Oncol 2015; 16: e23–31

Quality of Surgery in RCTs

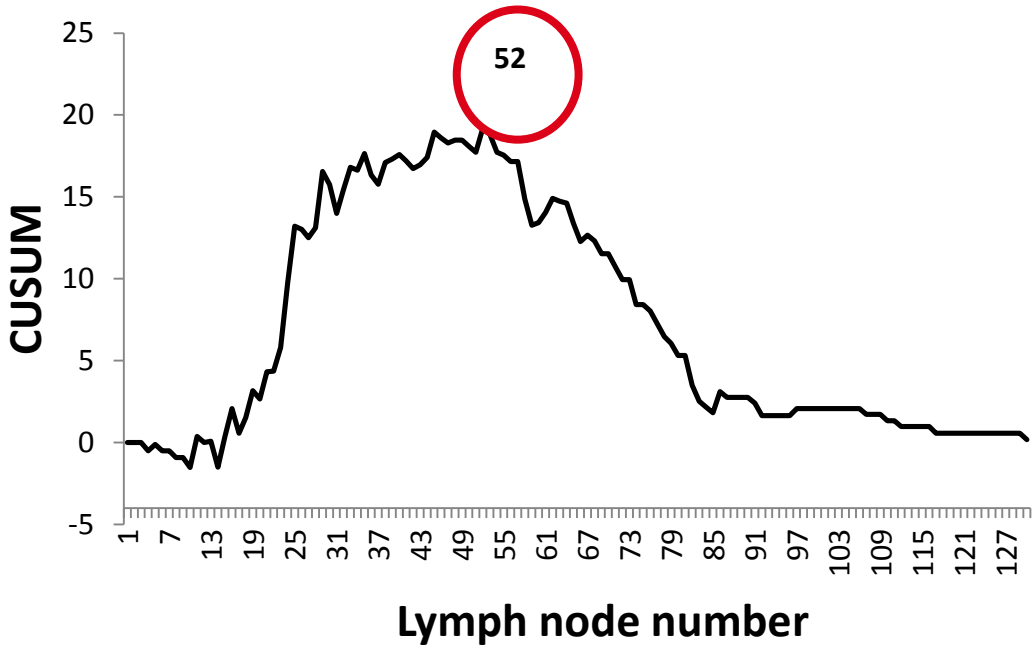
Results of RCTs depend on

- **Credentialing surgeons before enrollment in study**
- **Standardisation of surgical techniques**
- **Monitoring of surgical performance during trial**

Lancet oncology 2015

Local clearance

Recurrence after neo-adjuvant chemotherapy

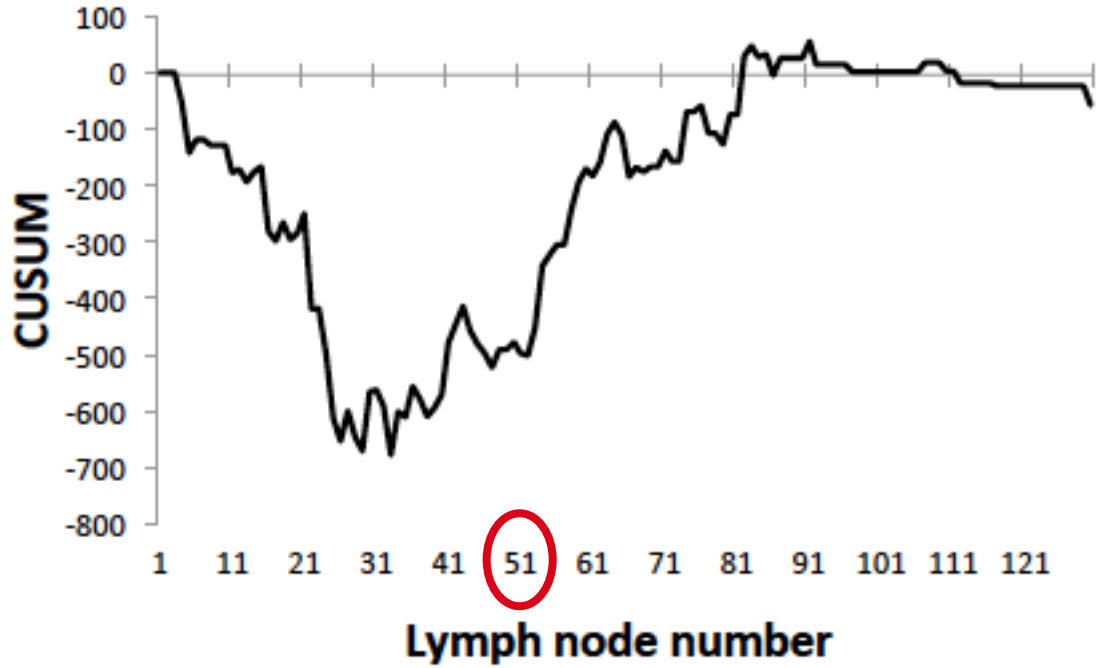


N=307 patients

Recurrence (47 vs. 16% - P<0.001)

Local clearance

Disease free survival after neo-adjuvant chemotherapy



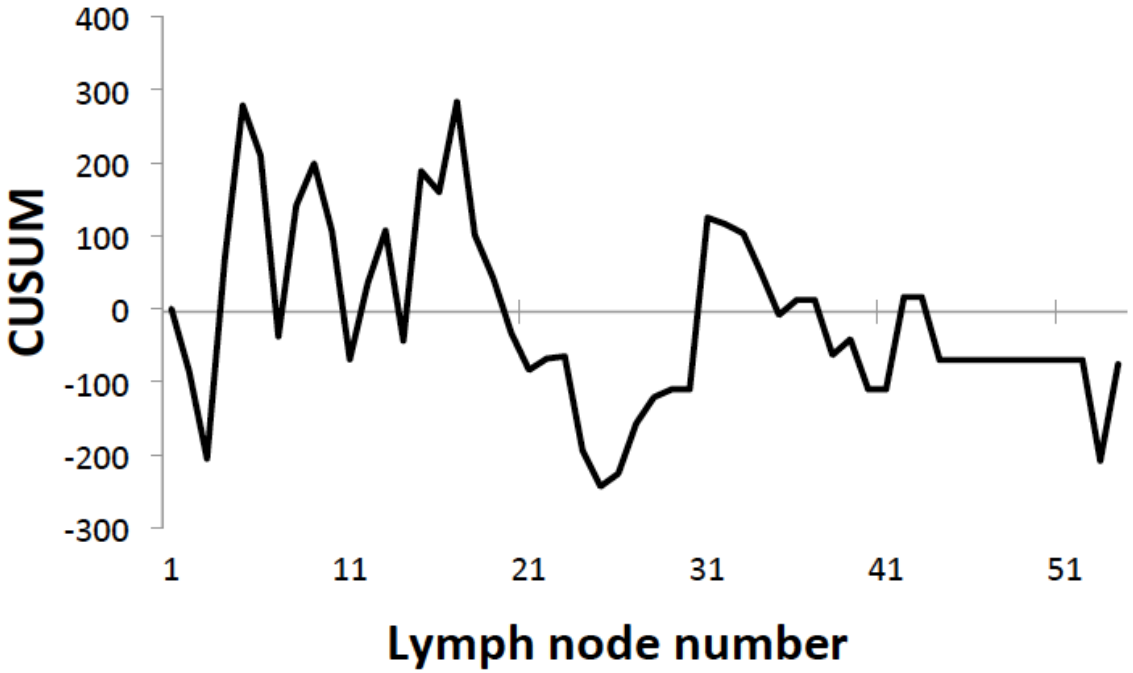
CUSUM (risk adjusted cumulative sum)

N=307 patients

Disease free survival (22 to 36 months; P=0.028)

Local clearance

after neo-adjuvant chemo radiotherapy



N= 301 patients

CUSUM (risk adjusted cumulative sum)

No lymph node threshold count

Neo-adjuvant chemo radiotherapy

Lymph Node Retrieval During Esophagectomy With and Without Neoadjuvant Chemoradiotherapy

Prognostic and Therapeutic Impact on Survival

A. Koen Talsma, MD, Joel Shapiro, MD,* Caspar W. N. Looman, PhD,† Pieter van Hagen, MD,* Ewout W. Steyerberg, PhD,† Ate van der Gaast, MD, PhD,‡ Mark I. van Berge Henegouwen, MD, PhD,§ Bas P. L. Wijnhoven, MD, PhD,* and J. Jan B. van Lanschot, MD, PhD*; On behalf of CROSS Study Group*

(*Ann Surg* 2014;260:786–793)

Survival in Patients With Esophageal Adenocarcinoma Undergoing Trimodality Therapy Is Independent of Regional Lymph Node Location

Boris Sepesi, MD, Henner E. Schmidt, MD, Michal Lada, MD, Arlene M. Correa, PhD, Garrett L. Walsh, MD, Reza J. Mehran, MD, David C. Rice, MD, Jack A. Roth, MD, Ara A. Vaporciyan, MD, Jaffer A. Ajani, MD, Thomas J. Watson, MD, Stephen G. Swisher, MD, Donald E. Low, MD, and Wayne L. Hofstetter, MD

(Ann Thorac Surg 2016;101:1075–81)

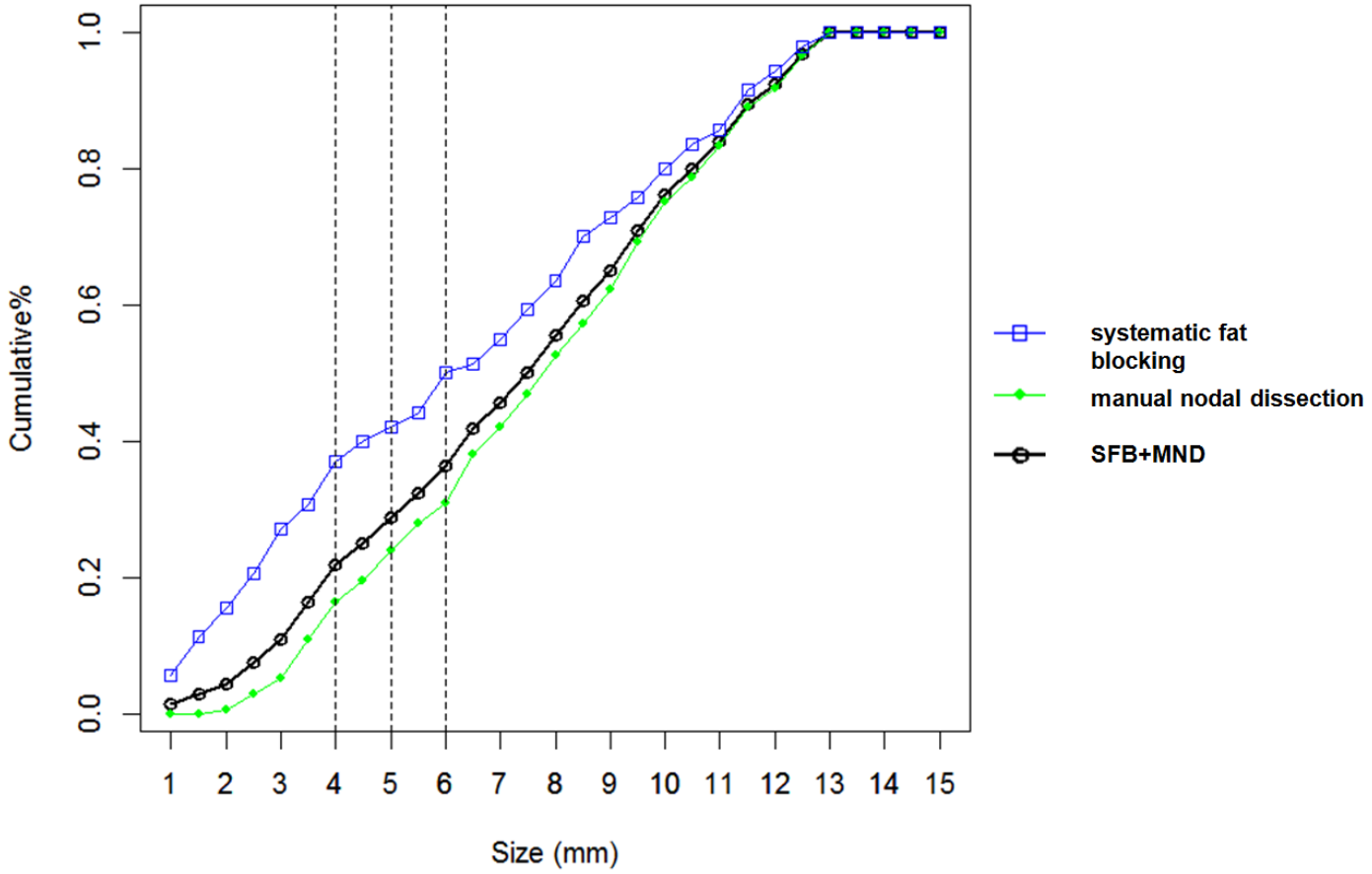
Lymphadenectomy along superior mediastinum

- **Squamous cell carcinoma** ***(38% +ve LN)***
- **Adenocarcinoma up to mid-oesophagus** ***(36% +ve LN)***

Mine et al Ann Surg Oncol 2014

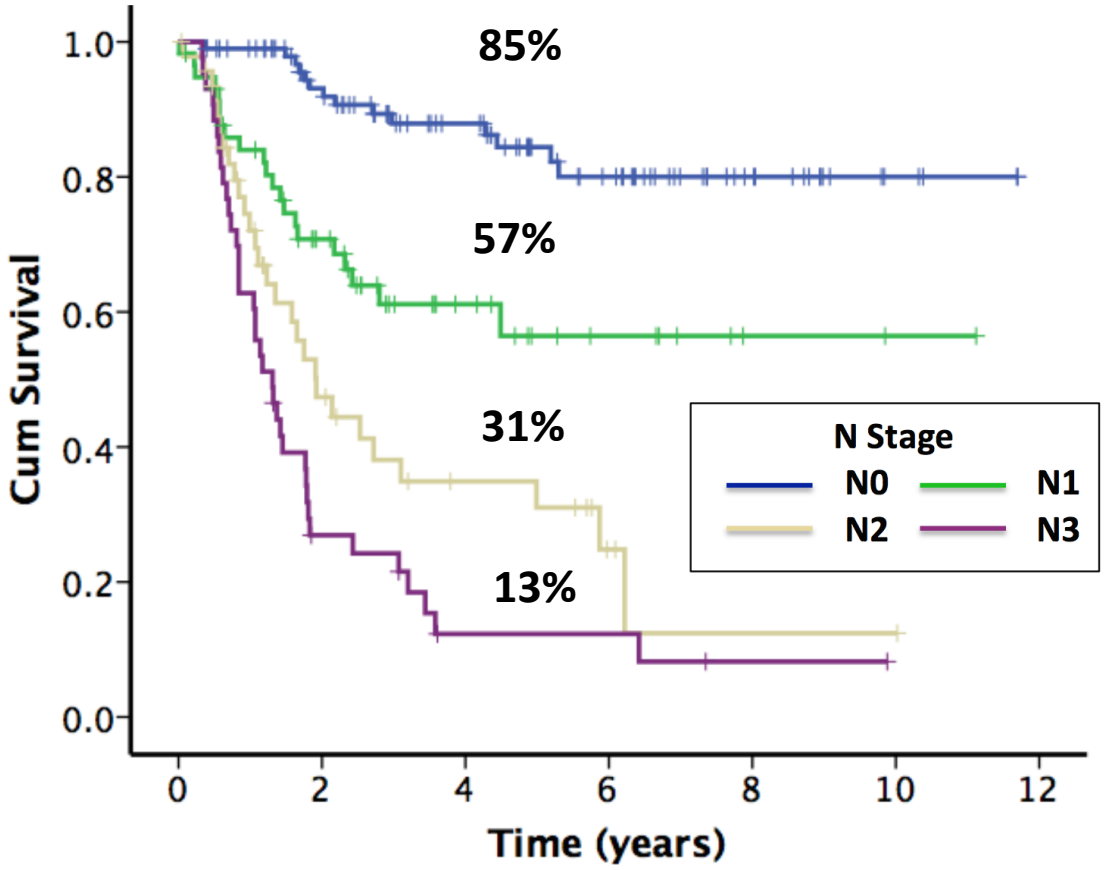
- **Enlarged lymph nodes in superior mediastinum**
- **N3 disease**

LN size cannot be the basis for extent of surgery



Hanna et al. Histopathology 2013

py N3

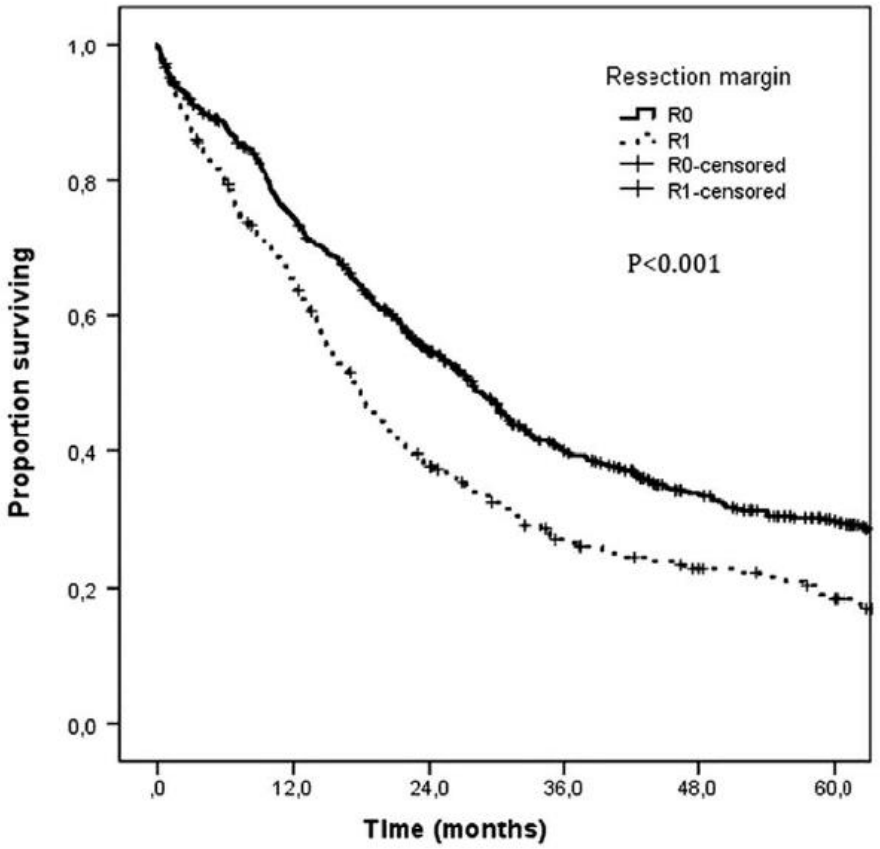


N3

5y 13%

3y 24%

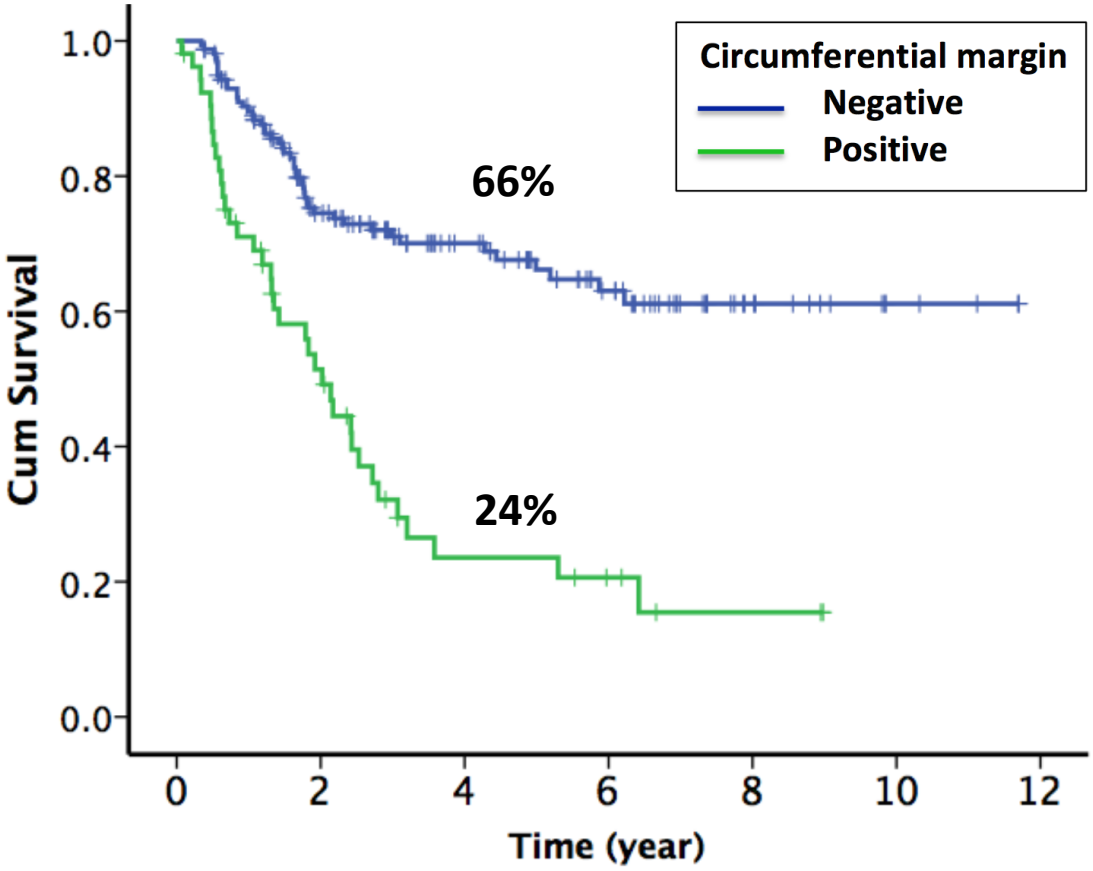
Significance of Microscopically Incomplete Resection Margin After Esophagectomy for Esophageal Cancer



R1 indicates aggressive tumour biology

(*Ann Surg* 2016;263:712–718)

Circumferential margin



Imperial College London

Which patients with esophageal cancer should not be operated?

Patient

critical co-morbidities that cannot be optimised

Disease

M, T4b, T1a, SCC in superior mediastinum

Surgical strategy

cannot achieve local and regional clearance

Thank you