

NEOADJUVANT THERAPY FOR ESOPHAGEAL CANCER

OVERVIEW

Esophageal Cancer: 13,000 new cases each year in US
Aggressive : often presents as T3 or N1 and is associated with poor prognosis.
Symptoms: dysphagia, weight loss, vomiting/regurgitation, pain, cough
Histologic types: Squamous Cell Carcinoma, Adenocarcinoma
Diagnosis: CT, endoscopy, endoscopic ultrasound, PET

THERAPY

Surgical

- Preferred treatment for esophageal carcinoma.
- 5-year survival rates do not exceed 25%.
- Advances in surgical technique?
- Combination with other modalities?

Radiotherapy

- Palliation of symptoms (Local effects)
- Radiotherapy as a neoadjuvant treatment has been compared with surgery alone in a number of randomized clinical trials.
- No clear effect on survival has been demonstrated.

Chemotherapy

NEJM 1998: Kelson, et al. Chemotherapy vs Surgery alone for Epidermoid or Adenocarcinoma

- No significant differences between the two groups in median survival.
- 14.9 months with chemotherapy and 16.1 months with immediate surgery.
- 1 year survival rates: 59% chemotherapy; 60% surgery alone.
- 2 year survival rates: 35% chemotherapy; 37% surgery alone.

NEJM 1997: Bosset, et al. Chemotherapy vs Surgery alone (SCC)

- Prolongation of disease-free survival.
- Local effect ?
- Longer interval free of local disease.

Ann Surg Oncol 2003: Kaklamanos, et al. Meta-analysis: Neoadjuvant Treatment for Esophageal Carcinoma (11 trials)

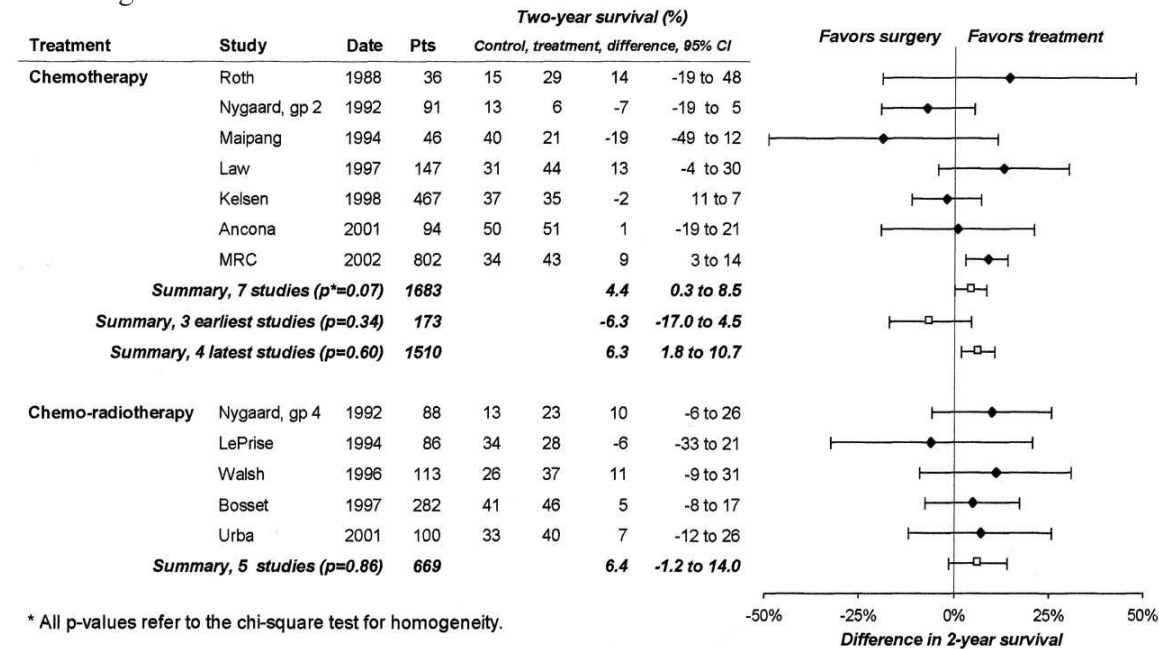
- Subgroups consisted of: 3 studies with cisplatin and bleomycin
4 studies with cisplatin and 5-fluorouracil
overall 5 with combined chemoradiotherapy treatment.
- Examined absolute % difference in survival at 2 years
- 2-year survival ranging from 6% to 51% in the treatment arm and from 13% to 50% in the control arm. Overall advantage for preoperative chemotherapy = 4.4%
- 2-year survival ranging from 23% - 46% with chemoradiotherapy versus 13% - 41% with surgery only. Overall a gain of 6.4%.

- 3-year survival (5 studies) ranged from 23% - 44% with neoadjuvant therapy and from 14% to 41% with surgery alone. Overall advantage of 5.1%.

NEJM 1997



Ann Surg Oncol 2003



* All p-values refer to the chi-square test for homogeneity.

TREATMENT-RELATED MORTALITY

- 119 treatment-related deaths in 1184 patients with neoadjuvant treatment
- 81 treatment-related deaths in 1127 patients with surgery alone.
- Overall a 2.3% increase in treatment-related mortality.

REFERENCES

- Bosset J et al. Chemotherapy followed by surgery compared with surgery alone in squamous-cell cancer of the esophagus **NEJM** 1997; 337: 161-7
- Kelson et al Chemotherapy followed by surgery compared with surgery alone for localized esophageal cancer **NEJM** 1998; 339 1979-84
- Kaklamanos IG et al Neoadjuvant treatment for resectable cancer of the esophagus and gastroesophageal junction: a metanalysis of randomized clinical trials. **Annals of Surgical Oncology** 2003 10(7): 754-761.