

# Role of systemic therapy

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# Disclosures

- Advisory role: Eli Lilly, Roche, Astra Zeneca, Boehringer Ingelheim, Clovis, Novartis, Bayer, Pfizer.
- Research funding (institutional): Roche, Astra Zeneca, Boehringer Ingelheim, Bayer.

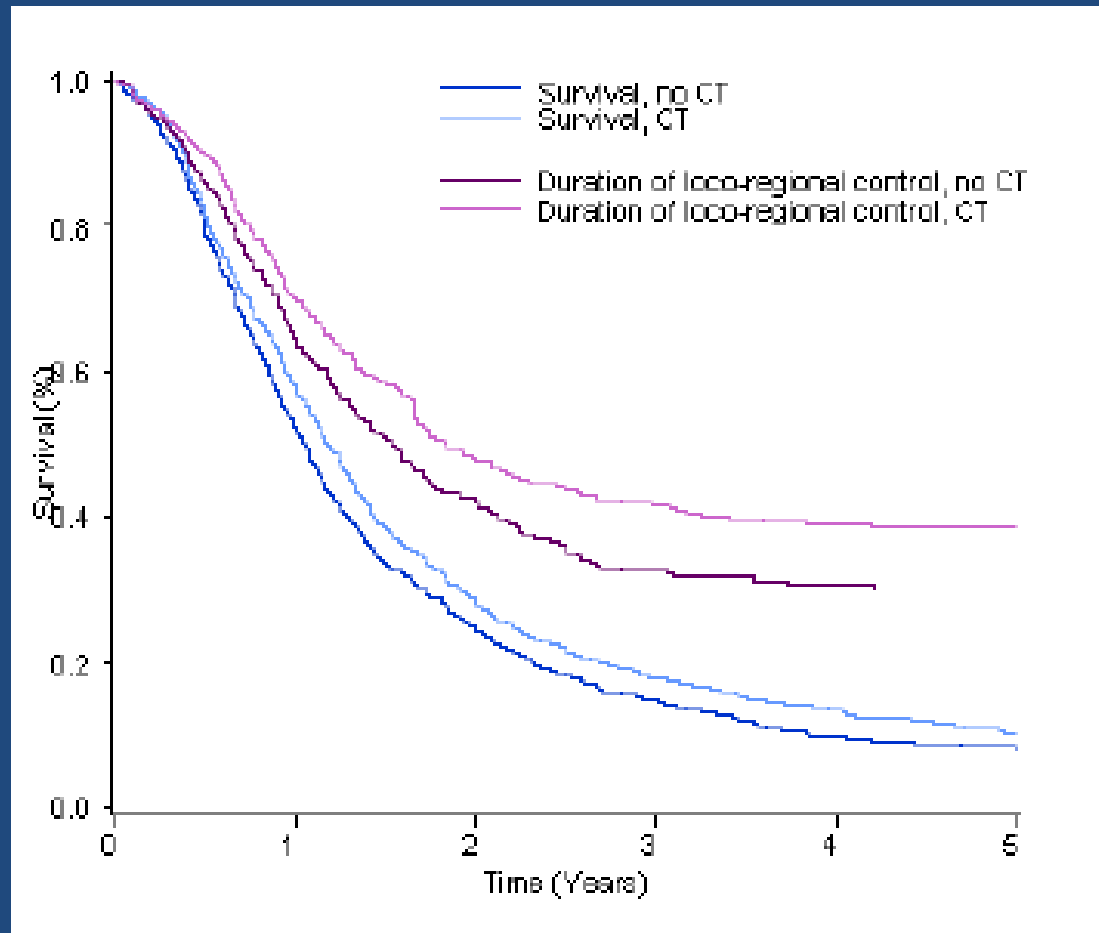
# Patterns of failure after bimodality radiation and surgery

- 1974 – 1998 225 pts thoracotomy for SST
- 52% stage IIB (T3N0)
- 55% preoperative radiation
- MST 33 months
- Locoregional disease most common form of relapse

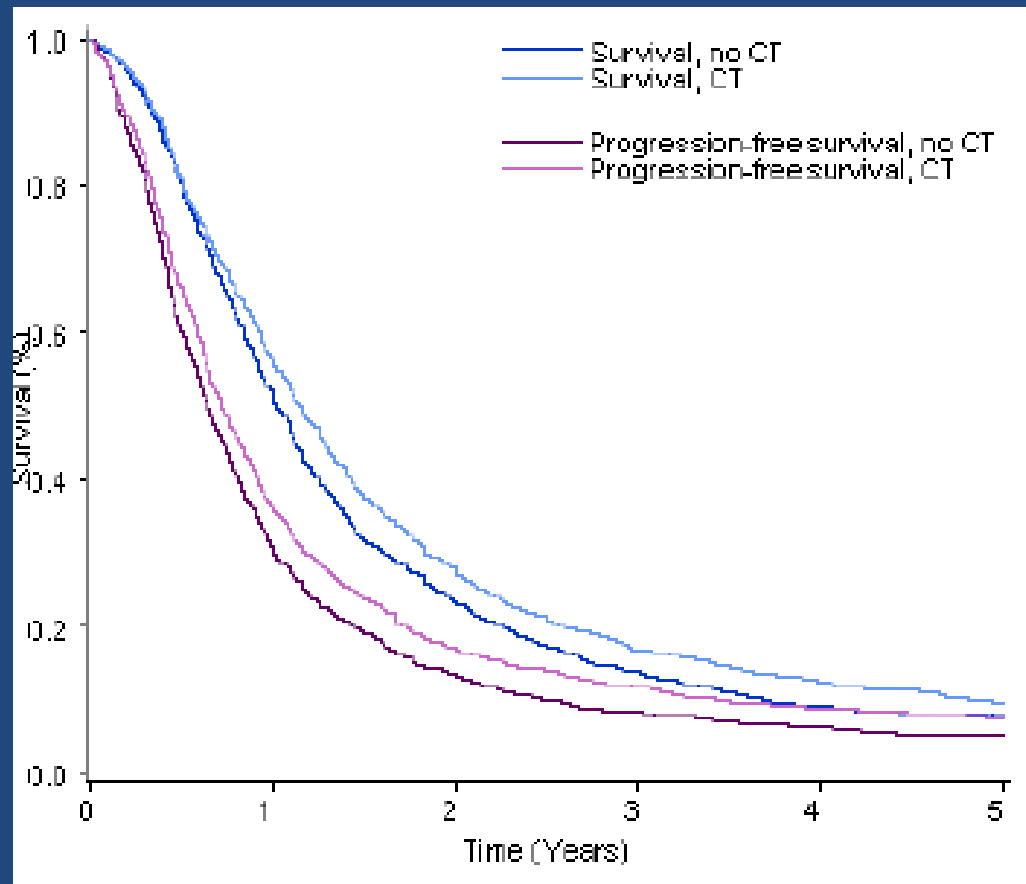
# Goals of systemic therapy in SST

- Improve local-regional control
  - Improve resectability
- Improve distant control

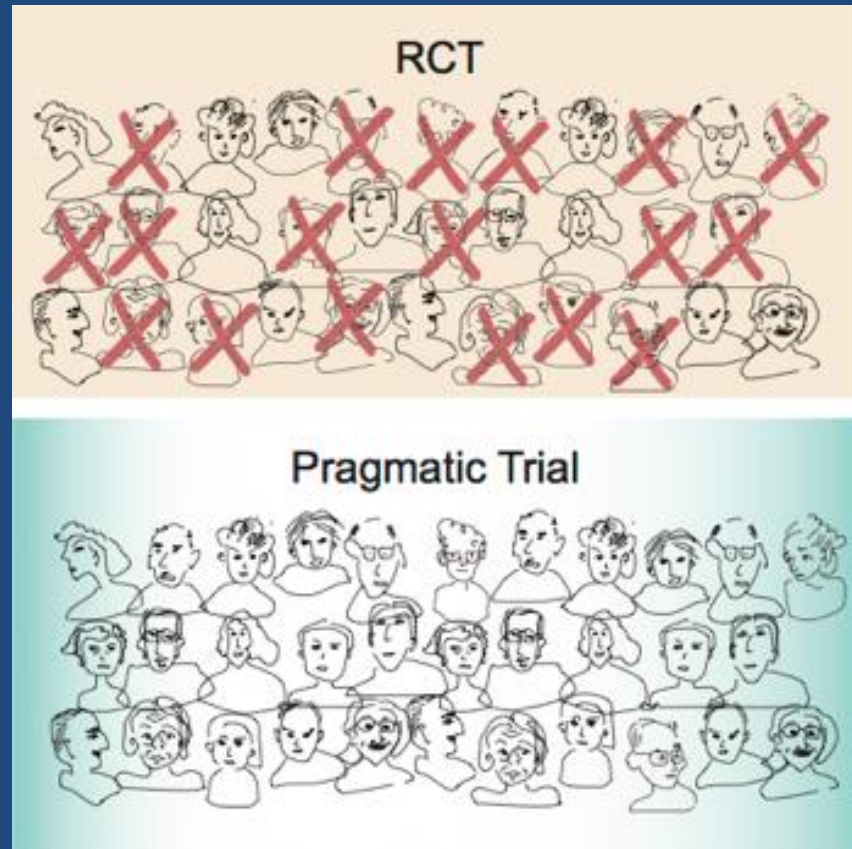
# Improving loco-regional control in unresectable stage III NSCLC



# Improving distant control rates in unresectable stage III NSCLC



# Does this apply to SST?

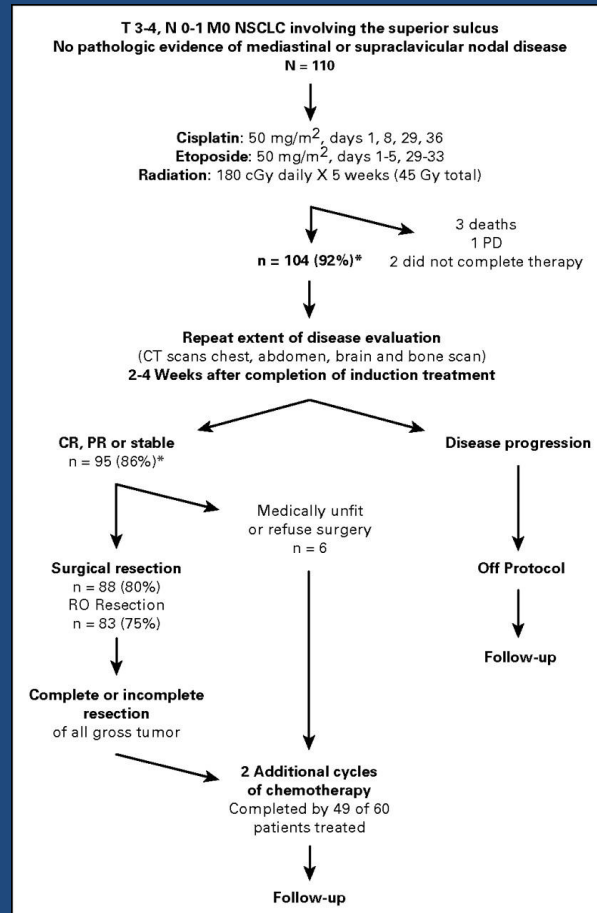


# Does this apply to SST?

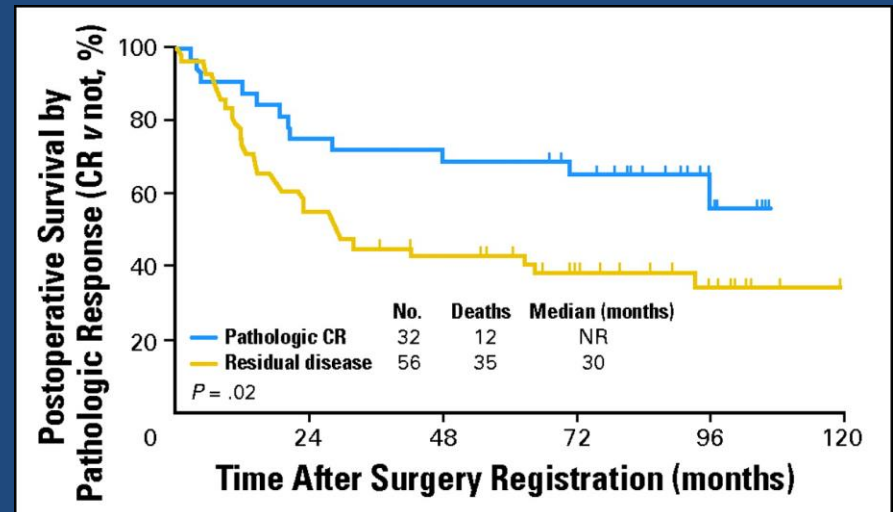
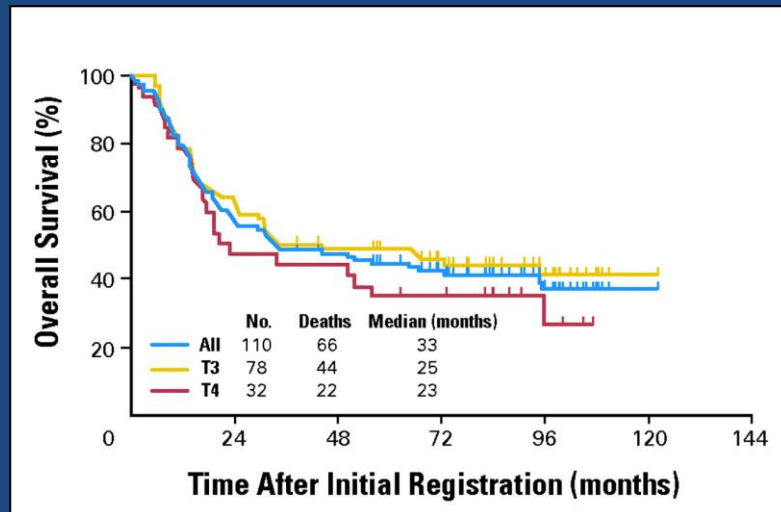
- No randomized trials
- Phase II studies
  - SWOG
  - Institutional series



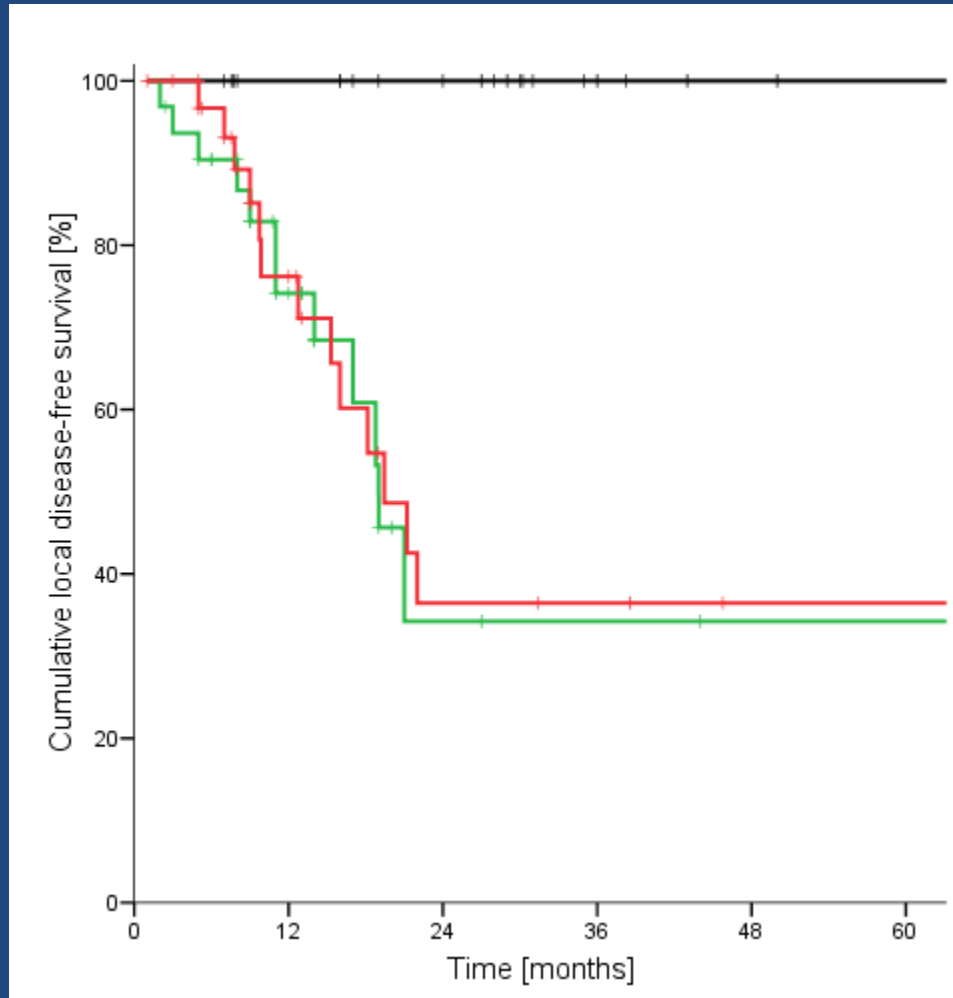
# SWOG 9416 (Intergroup Trial 0160)



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# High dose radiotherapy and daily cisplatin

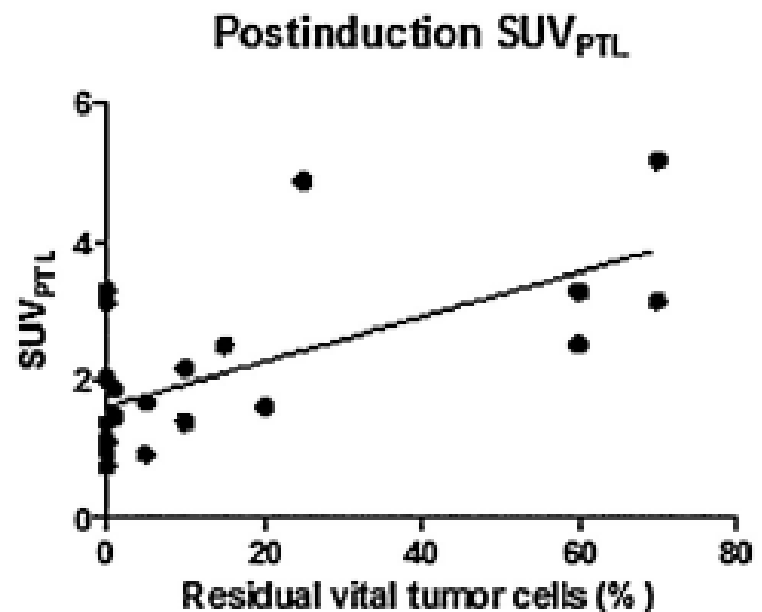
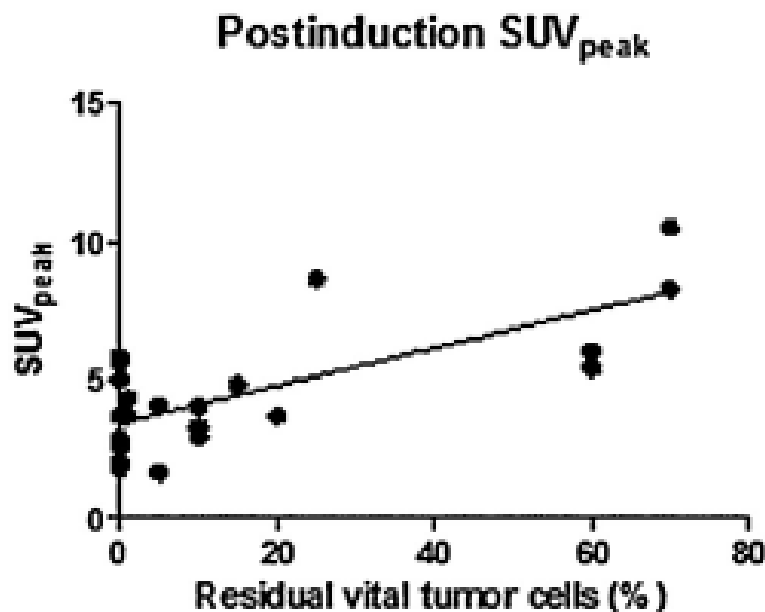


# Prediction of pCR to induction Cx-RT

- FDG-PET b/a induction Cx-RT (n=23)
- Correlation with pathology of resection specimen
- Postinduction SUV (peak) and SUV(PTL) correlated significantly with pCR.

# Prediction of pCR to induction Cx-RT

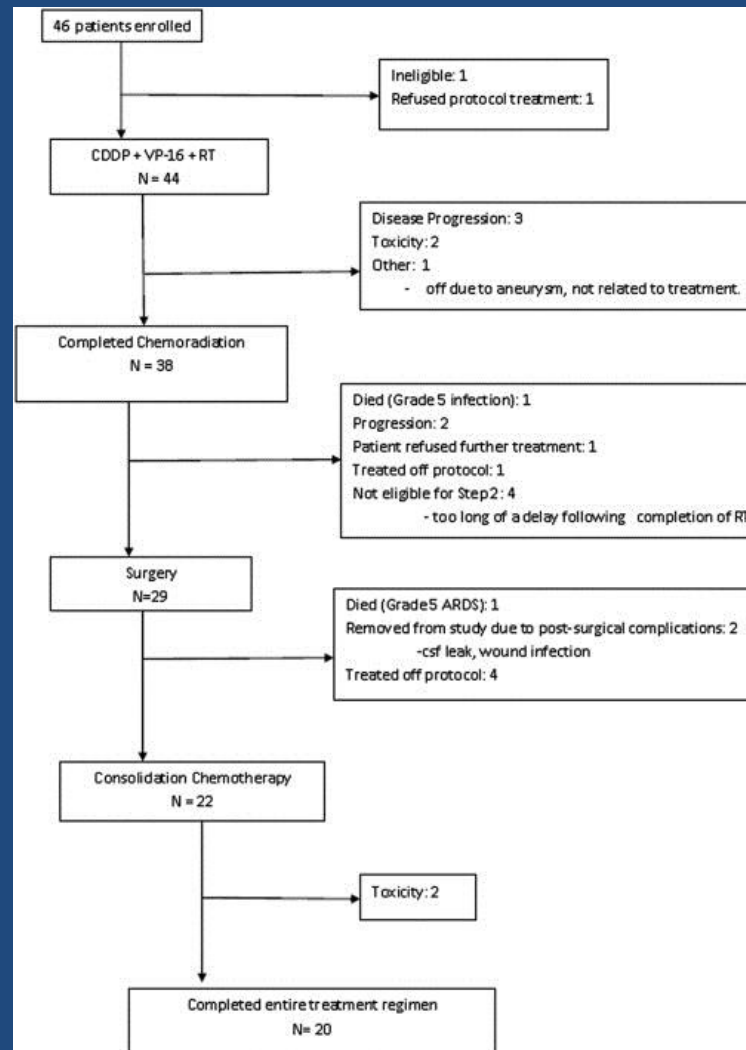
## Postinduction $SUV_{peak}$ and $SUV_{PTL}$ vs Pathologic Response



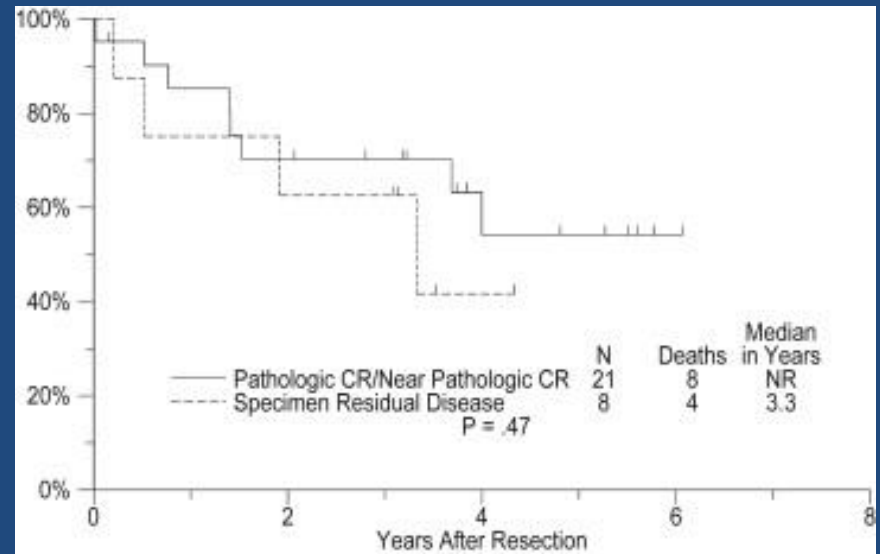
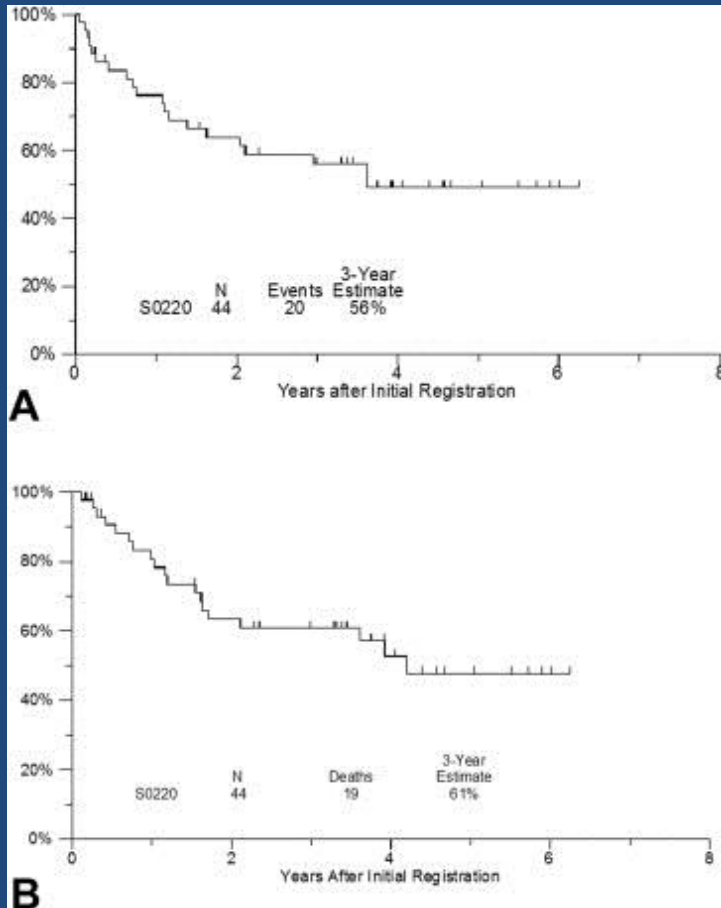
# SWOG 9416 (Intergroup Trial 0160)

Site of relapse	Total no patients	T3	T4
Total	57	38	19
Local	10	5	5
Distant	19	14	5
Local + distant	7	3	4
Brain only	19	16	3

# Improving distant control: SWOG-Intergroup trial S0220

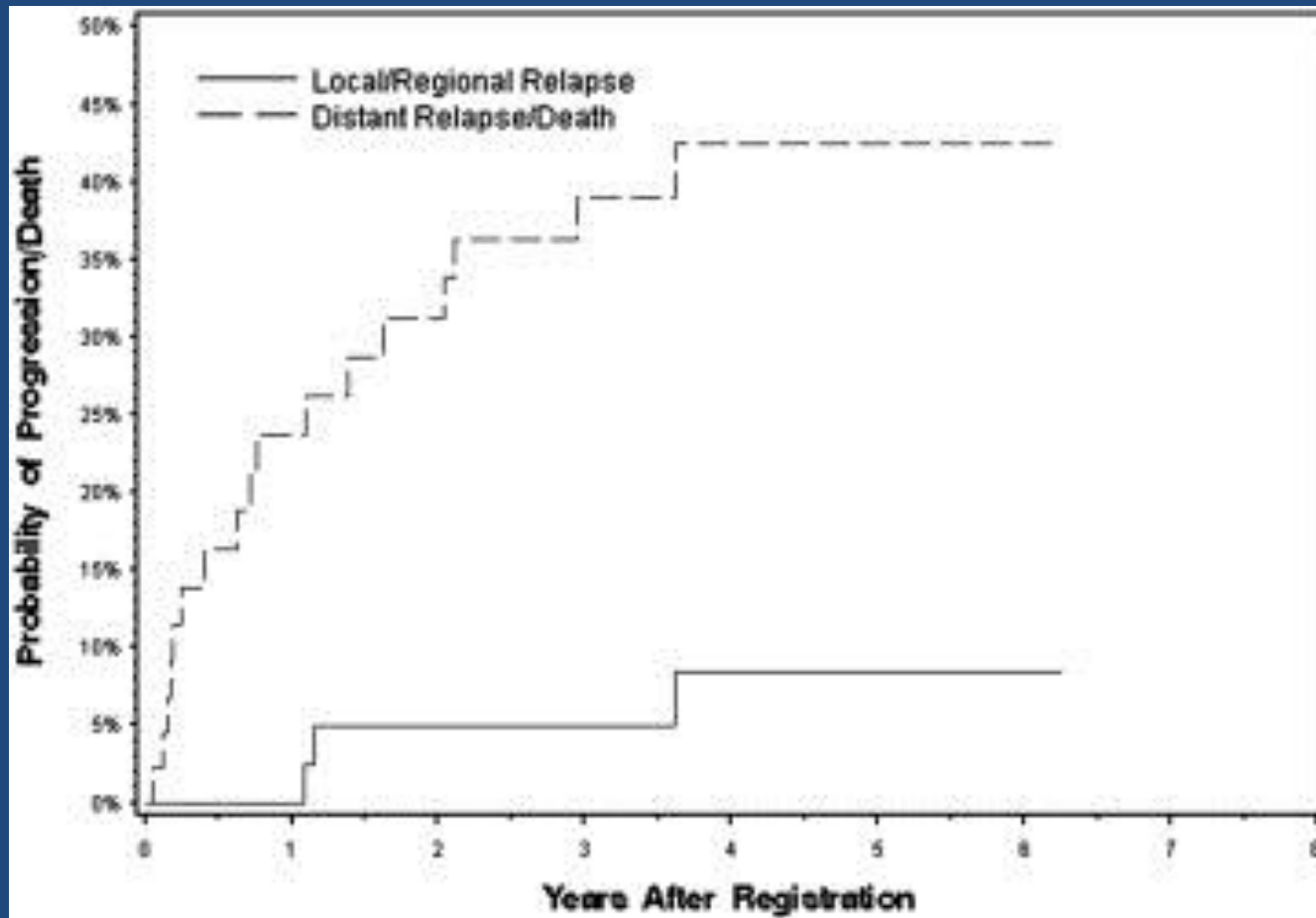


# Improving distant control: SWOG-Intergroup trial S0220





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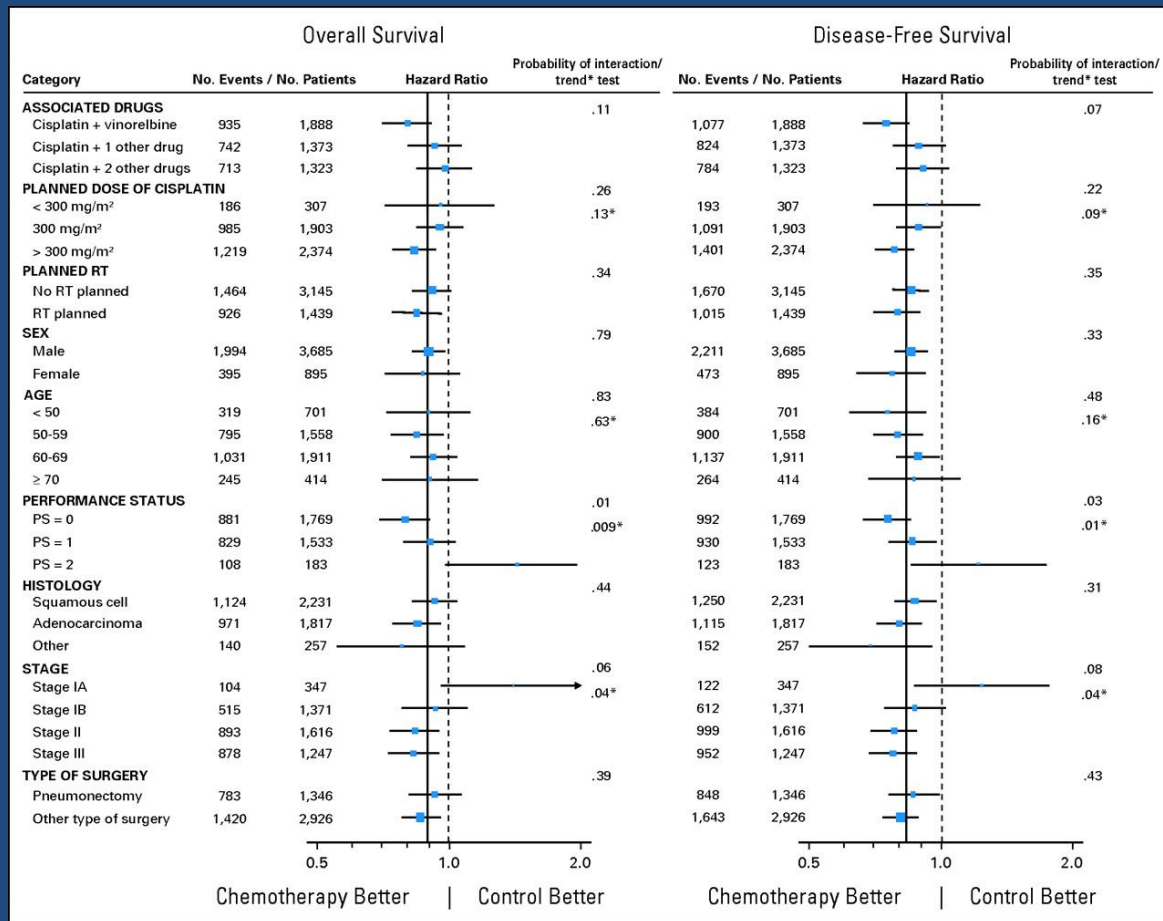
# Which chemotherapy?

- Cisplatin-etoposide most frequently reported.
- No randomised trials

# Selected phase II trials in SST – details of chemotherapy

First author	No Patients	Induction regimen	RT	No deaths	No PD
Rusch 2001,2007	110	PE x 2	45 Gy	3 (2.7%)	9 (8.2%)
Marra 2007	31	PE x 3	45 Gy + PCI	0	NA
Pourel 2008	107	PE x 2	45 Gy	3%	NA
Fischer 2008	44	PE x 2	45 Gy	0%	NA
Kunitoh 2008	76	MVP x 2	45 Gy	1.3%	6.7%
Kappers 2009	22	P	66 Gy	0%	NA

# Does Cisplatin dose matter? Lessons from adjuvant trials



# Conclusions

- Systemic therapy improves locoregional control rates and pCR rates in trimodality programs for SST
- Distant relapse limits long term survival
  - Brain only relapse
- Optimal chemotherapy not identified