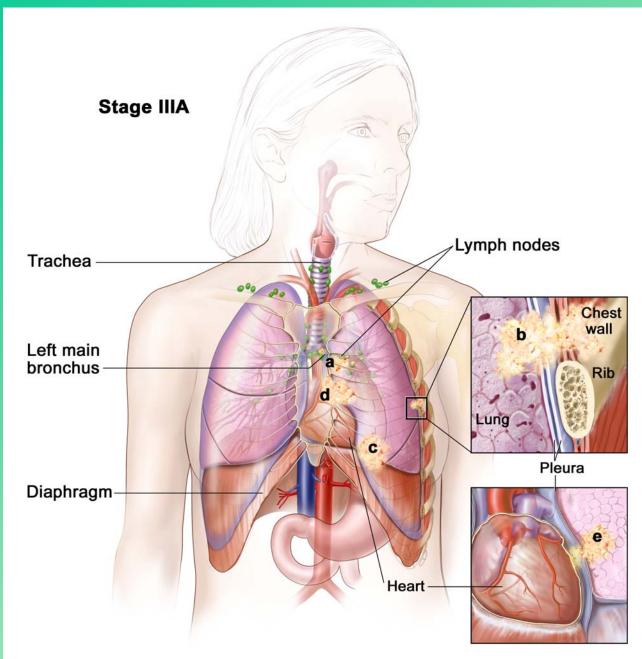
# Approach to Stage IIIA Lung Cancer Current Concepts

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National Cancer Institute

T1-3 N2 T3\* N1

> \*T3: Locally invasive, or <2 cm from carina, or obstructive atelectasis



# Focus on Patients with Ipsilateral Mediastinal Adenopathy

- Three groups of patients:
  - Massive IIIA Clinical i.e., it is obvious before surgery that the mediastinum is involved
  - Minimal IIIA Clinical minimal mediastinal involvement pre-op where immediate surgery is thought feasible
  - Accidental IIIA patients thought to have lesser disease who are discovered to have IIIA at surgery

### **Ipsilateral Mediastinal Adenopathy**

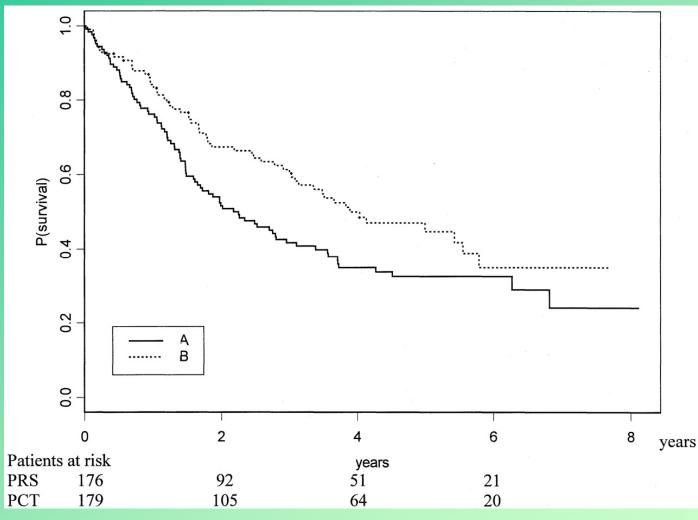
- Focus on Group I: patients thought inoperable by virtue of mediastinal adenopathy
  - Look at pre-op chemotherapy with or without radiation with or without subsequent surgery
  - After several years of doing this, data from studies are now mature as to outcome



### Studies to be Examined

- Pre-op chemo + surgery vs. surgery alone (Depierre, JCO, 2002)
- Pre-op chemo →RT versus chemo→surgery (VanMeerbeek, JNCI, 2007)
- Non-randomized Chemo→Surgery when feasible (compared to patients inoperable after chemo in same study) (Garrido, JCO, 2007)
- Intergroup 0139: Pre-op Chemo/RT with or without subsequent surgery (Albain Proc Am Soc Clin Onc, 2005)

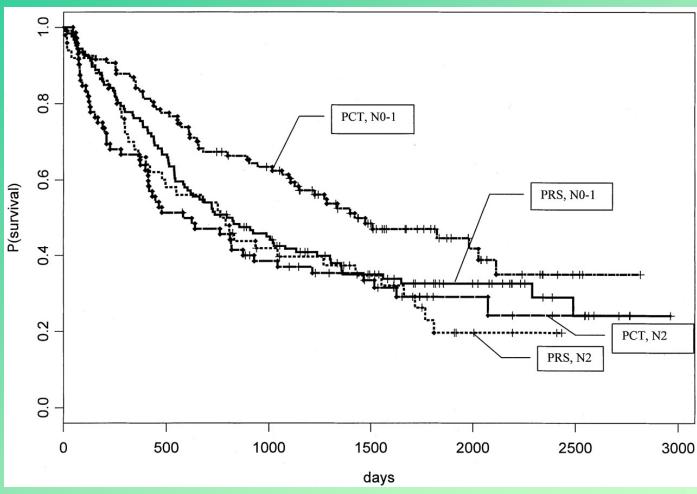
# Overall survival by treatment arm: arm A: Surgery only; arm B, PCT + Surgery



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Depierre, A. et al. J Clin Oncol; 20:247-253 2002

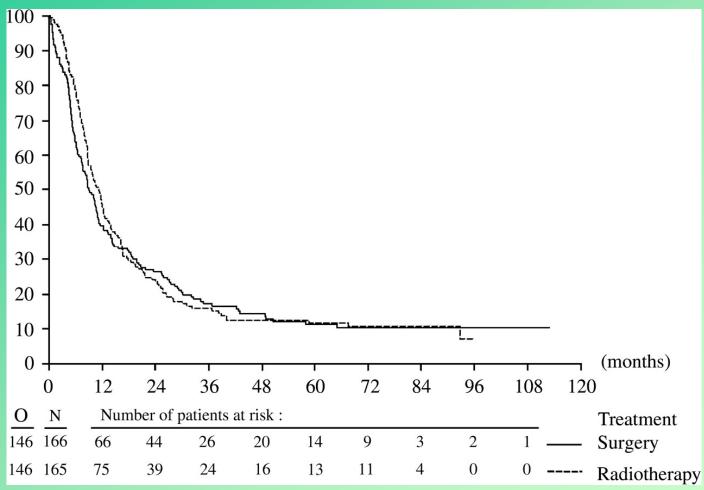
#### Overall survival by treatment arm and by nodal status



Depierre, A. et al. J Clin Oncol; 20:247-253 2002



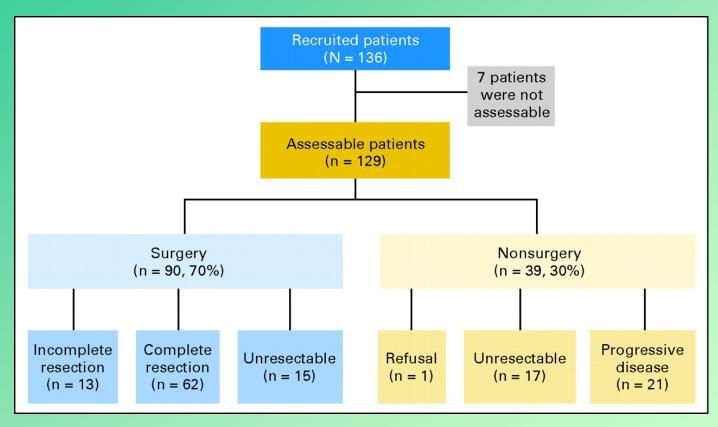
## Progression-free survival rates estimated from time of randomization using Kaplan-Meier analyses



van Meerbeeck, J. P. et al. J. Natl. Cancer Inst. 2007 99:442-450;



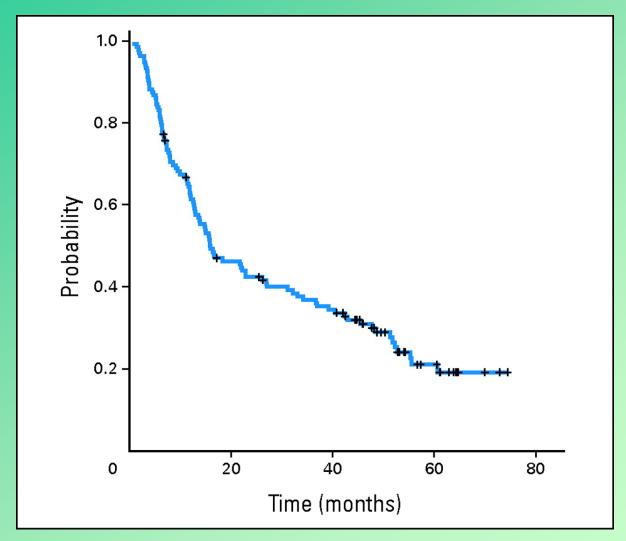
## Flow Diagram of non-randomized trial using chemo followed by surgery in patients sufficiently downstaged – a real-world approach



Garrido, P. et al. J Clin Oncol; 25:4736-4742 2007



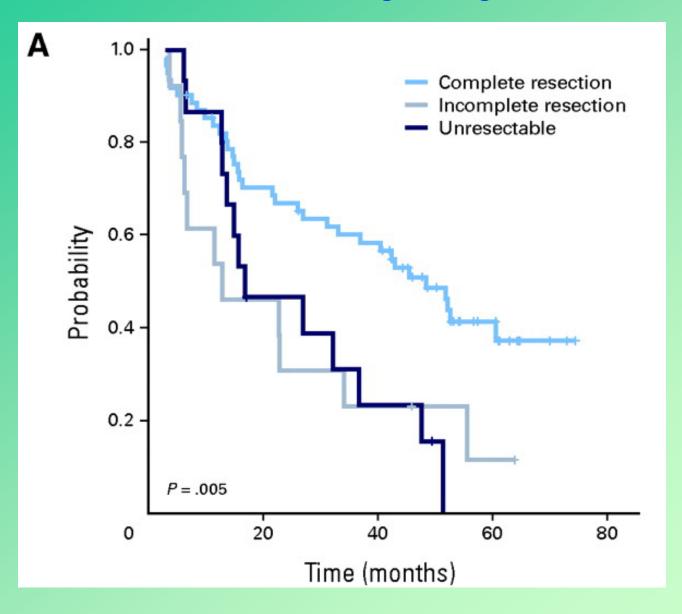
#### **Overall survival curve for all 136 patients**



Garrido, P. et al. J Clin Oncol; 25:4736-4742 2007

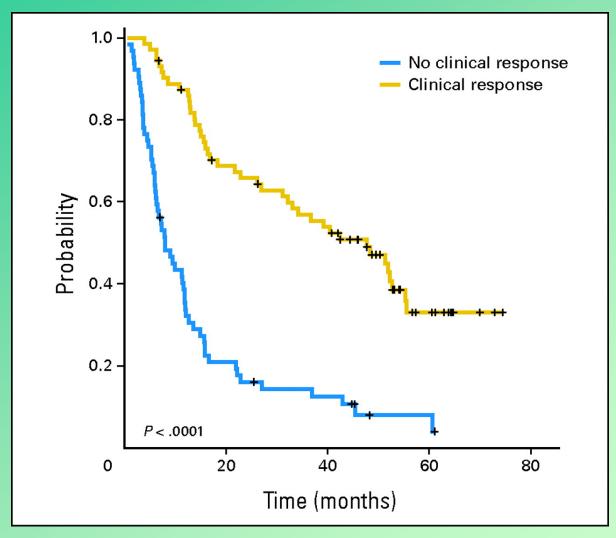


#### Median survival according to surgical resection





#### **Overall survival according to clinical response**



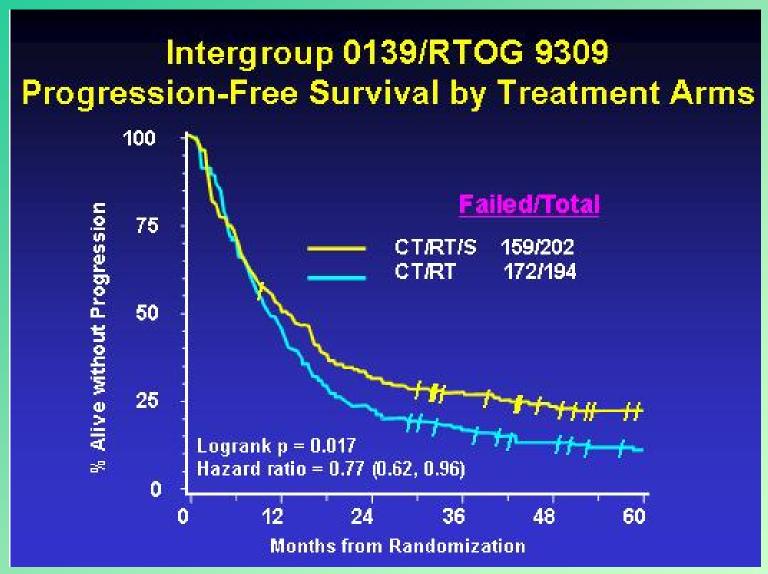
Garrido, P. et al. J Clin Oncol; 25:4736-4742 2007



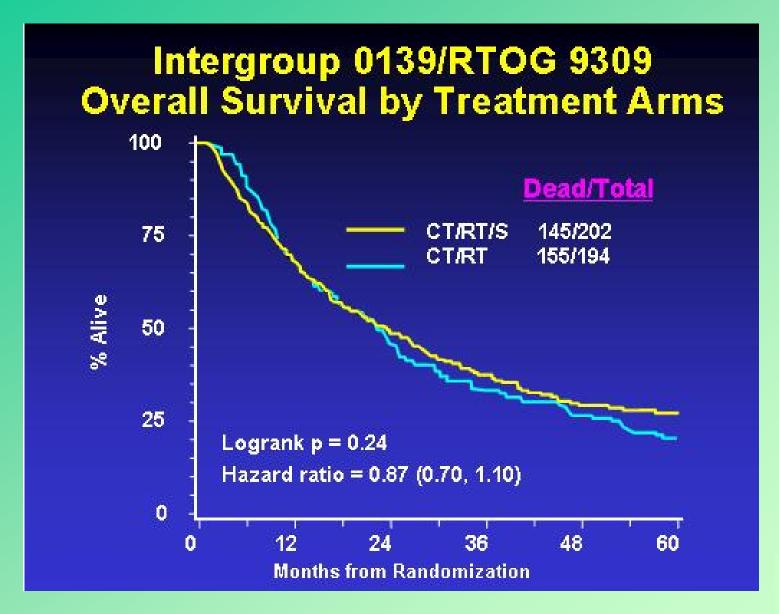
# Randomized Trial Looking at Value of Surgery after optimal Chemo/RT

- Intergroup Trial 0139
- Chemo/RT with our without subsequent surgery
- Results published in abstract form only at 2005 ASCO meeting









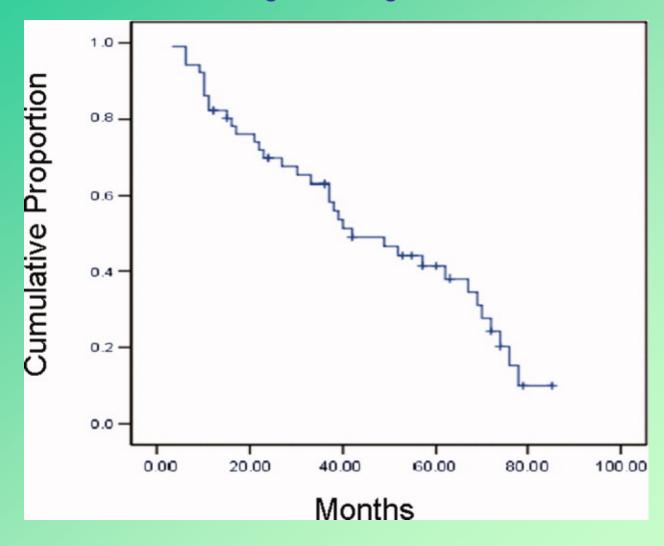


#### The Problem of Brain Metastases

- Recent study looked at patients who obtained a pathologic complete remission after pre-op chemo±RT followed by surgery (Chen, CANCER, 2007)
- 211 patients started study; 51 completed treatment including surgery and had no tumor in resection specimen
- Those 51 patients were further analyzed…



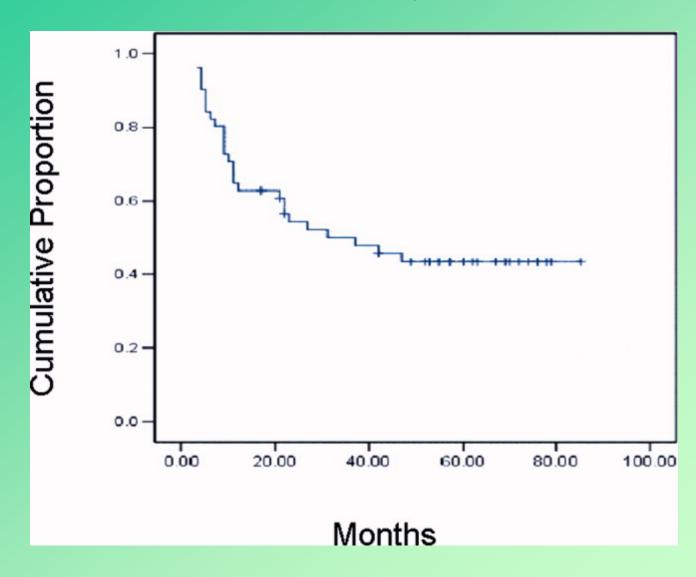
# Survival curve for PCR patients after chemo ± RT followed by surgery for Stage IIIA lung cancer



Chen et al *CANCER* 109:1668, 2007

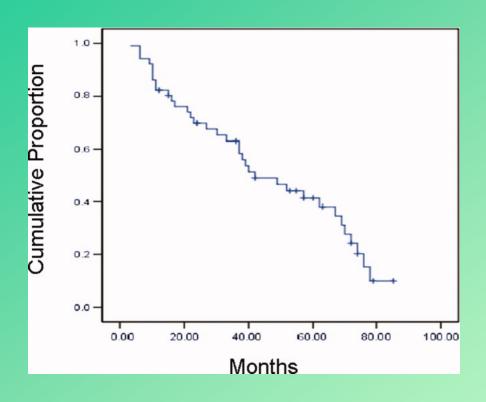


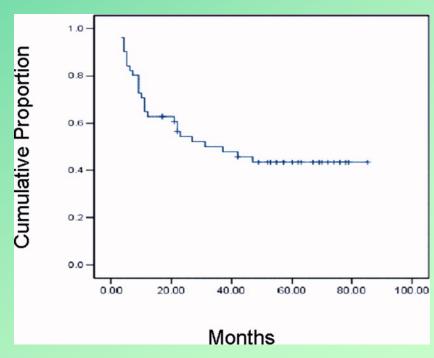
# Survival without brain metastases in subset of patients





## Side-by-side Comparison





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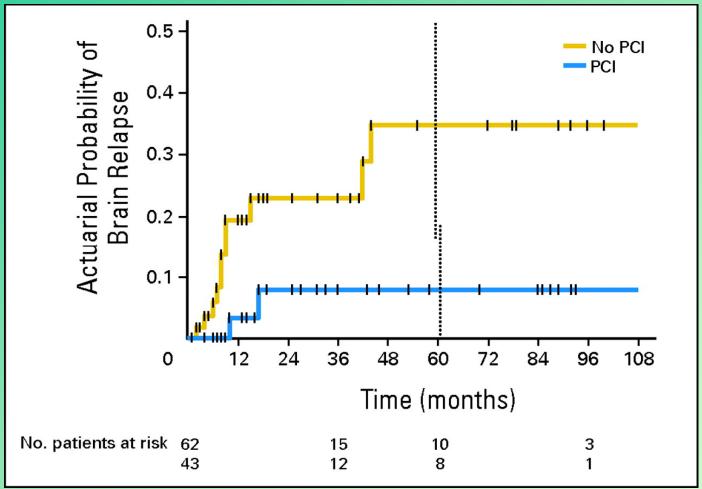
Overall survival of group Survival if no brain mets

## Brain Mets, continued

- Above study raises question of whether with improved systemic therapy for NSCLC we should consider prophylactic cranial radiation
- Preliminary data....just published



# Actuarial probabilities of brain relapse at first site of failure according to the treatment actually administered



Pottgen, C. et al. J Clin Oncol; 25:4987-4992 2007

Neurocognitive defects in both groups (!)



### Conclusions

- Long-term survival now possible with patients with Clinical Stage IIIA NSCLC
- Optimal integration of chemo, radiation and surgery still to be worked out
  - Role of surgery after chemo/RT uncertain
  - Nonetheless pathologic complete response at surgery seems to be important
  - As expected chemo responders do better than nonresponders – attests to the value of chemo
- As patients do better we need to worry about brain metastases

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