small cell lung cancer
consolidation or concomitant RT

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δήλωση συμφερόντων

- δηλώνω ότι δεν έχω (προσωπικά ή ως μέλος εργασιακής/ερευνητικής ομάδας) ή μέλος της οικογένειάς μου οποιοδήποτε οικονομικό ή άλλου είδους όφελος από τις εταιρείες/επιχειρήσεις που διοργανώνουν/χρηματοδοτούν την άνω εκδήλωση κατά τη διάρκεια των τελευταίων 4 ετών

outline

- basics of SCLC
- Limited Stage SCLC (LS - SCLC)

  - role of thoracic RT

  - sequential vs. concurrent

  - timing of RT relative to chemotherapy

  - radiotherapy dose/fractionation
- Extensive Stage (ES - SCLC)

  - consolidative or concurrent?
- RT approach

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epidemiology

- 5-20% of all lung cancers
- incidence decreasing
- >95% associated with tobacco
- average age increasing (60% ≥70 years old)
- most important prognostic factors:

  - stage

  - KPS

Simon et al., *Chest* 2007;132:324S-339S
Lally et al., *Lung Cancer* 2009; 64:226-231

work up

- H&P
- labs:
  - CBC
  - BUN/Crea
  - LDH
- imaging:
  - CT chest/abdomen
  - bone scan or PET scan
  - MRI brain
- pathology:
  – FNA (EBUS- or CT-guided)
- smoking cessation referral

role of PET

- role of PET for SCLC staging not clearly established
- PET for RT planning: 1 study showed a change of RT fields in 25% of cases with the use of PET
- selective nodal irradiation with the use of PET showed only 3% nodal failure rate and 50% decreased esophagitis

Van Loon et al., *Radiother Oncol* 2008; 87:49-54
Van Loon et al., *IJROBP* 2010; 77:329-336

staging

- role of PET for SCLC staging not clearly established
- LS-SCLC: 1/3 at diagnosis
  - confined to the ipsilateral hemithorax
  - can be safely encompassed within a tolerable RT field
  - contralateral hilar and supraclavicular lymph nodes excluded in some studies
- ES-SCLC: 2/3 at diagnosis
  - beyond the ipsilateral hemithorax
  - malignant pleural/pericardial effusion
  - hematogenous metastases

Micke et al., *Cancer* 2003;37:271-276

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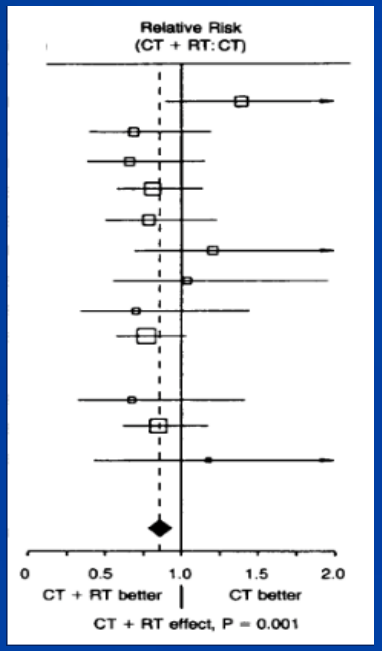
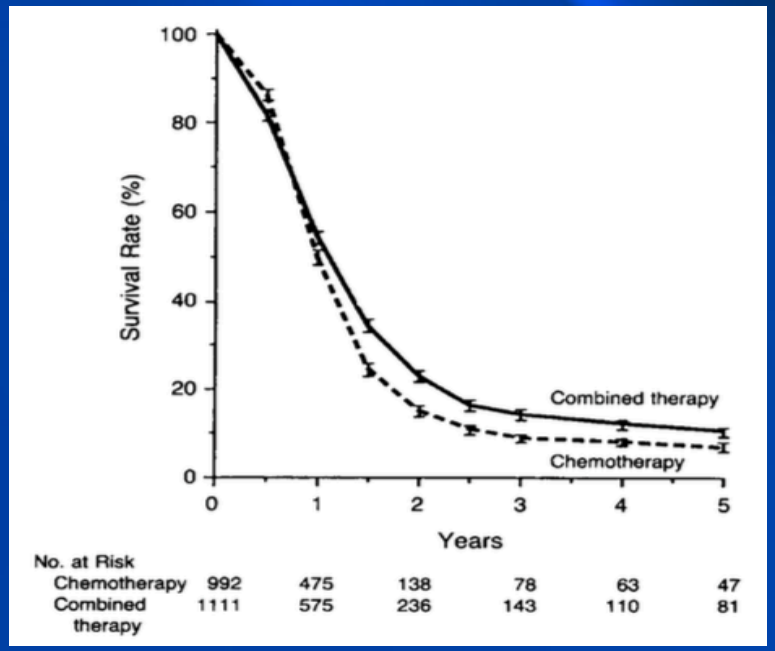
addition of RT to chemotherapy

- study details:
  - 13 randomized trials
  - n=2103 pts
  - only LS-SCLC

- results:
  - 5% improvement in 3y OS (14.3% vs. 8.9%; p=0.001)
  - larger benefit <55 y)





- similar results reported by Warde meta-anlysis:
  - 5% improvement in 2y OS
  - 25% improvement in local control (16.5% vs. 34.1%)

Pignon et al., *NEJM* 1992;327:1618-1624
Warde et al., *JCO* 1992; 10: 890-895

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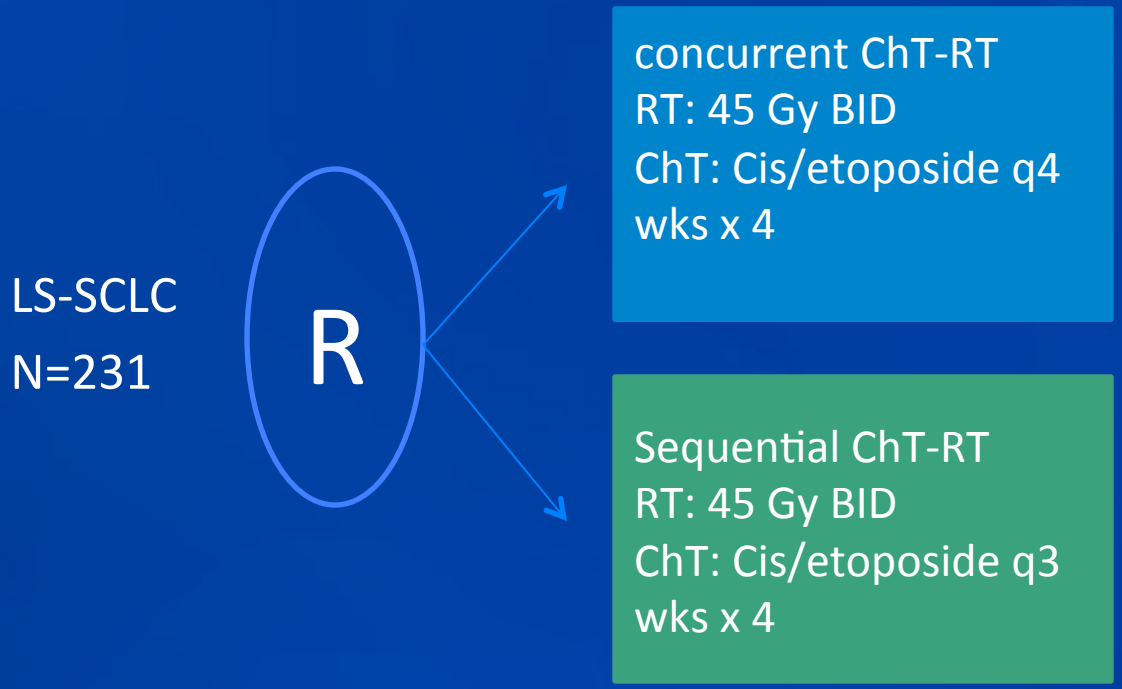
LS-SCLC: concurrent vs. sequential ChT-RT

Advantages for concurrent CRT	Advantages for sequential CRT
• Reduced risk of repopulation • Radiosensitizing effect of chemo?	• Smaller target volume → reduced toxicity

Disadvantages for concurrent CRT	Disadvantages for sequential CRT
• Increased acute toxicity • May not be feasible for elderly or large tumors	• Longer overall treatment time • Increased repopulation • Development of resistant clones?

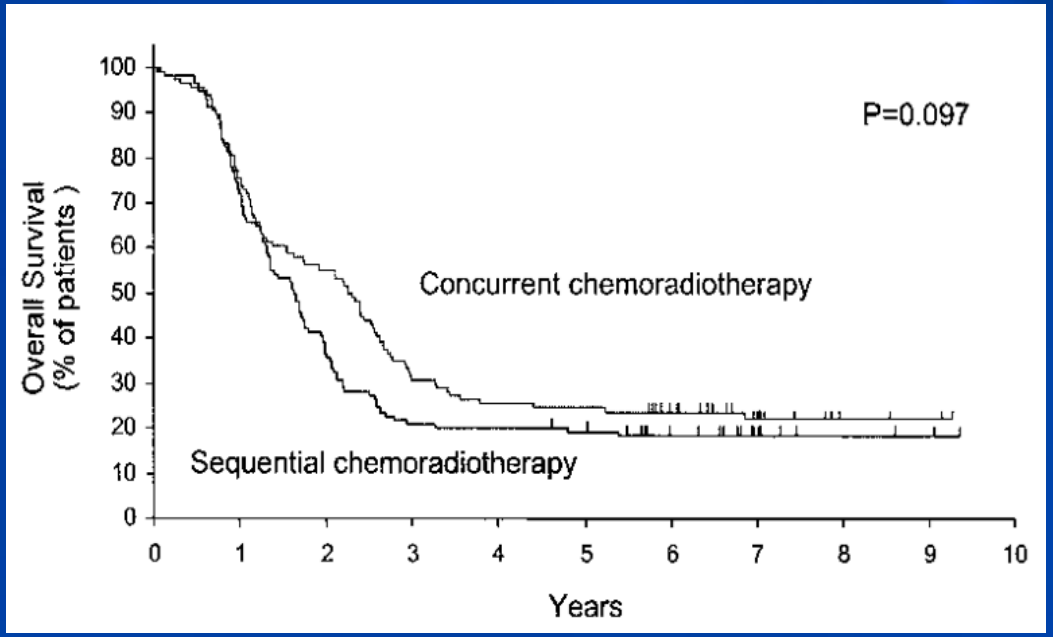
LS-SCLC: concurrent vs. sequential ChT-RT
JCOG 9104



Murray et al., *JCO* 1993;11: 336-344

LS-SCLC: concurrent vs. sequential ChT-RT JCOG 9104

- median OS 27.2 vs. 19.7 months with concurrent ChT-RT (p=0.097)
- ≥ Grade 3 hematologic toxicity (88 vs. 54%, p<0.001)
- no differrence in ≥ Grade 3 esophagitis (9 vs. 4%, p=0.2)



Takada et al., *JCO* 2002; 20: 3054-3060

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