
Surgery for Small Cell Lung Cancer?



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Basic Principles of Small Cell Lung Cancer (SCLC)

- SCLC accounts for ~13% of lung cancer in US
 - Declining over time
- Staging breakdown – 1/3 limited, 2/3 extensive
 - perhaps 5% “very limited” – stage I/II (no mediastinal nodes)
 - many suspected as node negative are upstaged at surgery
- Strong tendency to spread early
 - sensitive to chemo and radiation
 - chemo/radiation is standard for limited stage SCLC
 - surgery considered a reasonable option for very limited

Retrospective Reviews of Surgery in Patients with SCLC

- Multiple retrospective, single institution studies have shown that patients who undergo surgery for early stage SCLC have generally done well

Refefence	Inst.	N (St I)	Accrual Yrs	Surv (St I), %
Badzio, Eur J CT Surg, 2004	Med Univ. of Gdansk	67 (25)	1984 – 1996	27 (59*)
Lim, JTCVS 2005	Royal Brompton	51 (18)	1980 – 2003	NR [#]
Brock, JTCVS 2005	Hopkins	82 (48)	1972 – 2002	42 (58)
Chandra, Mayo Clin Proc 2006	Mayo	77 (18)	1985 – 2002	27 (36)

*T1N0M0 only # Far worse for SCLC vs other NE tumors

- **But is it the treatment or the patients/cancers??**

Is it the Treatment, or is it Patient Selection??

- Indolent bronchioloalveolar carcinoma
- Limited mesothelioma very responsive to pre-operative chemotherapy
- Locally advanced NSCLC that responds very well
- “Precocious metastases”/single focus

SEER Database Analysis of Surgery for SCLC

- 1560 patients with stage I SCLC, 1988 -2004
- 205 underwent lobectomy without post-op RT
 - 5 year survival 50.3% after surgery
 - 5-year survival 21.3% for non-surgical patients
- However, non-surgical group probably includes many non-stage I patients (clinical vs. path staging)
- Surgery patients may very well have been younger, more fit, and had smaller cancers (unknown)

Yu, J Thor Oncol 2010

Concerns about Surgery for (Very)Limited Small Cell Lung Cancer

- Patients potentially well suited to surgery (node negative/stage I) are rare and hard to identify
- Many patients are upstaged at surgery
- Many surgeons are not that rigorous in staging
 - >11,000 surgical pts w/NSCLC in US (Little, ATS 2005)
 - 27.1% of patients had pre-operative mediastinoscopy
 - Of these, only 46.6% had any lymph nodes removed
 - Only 42.2% had any mediastinal nodes sampled during surgery
 - Good practice requires vigorous selection predicated on staging that too few surgeons are doing

Retrospective Reviews of Surgery in Patients with SCLC

- Surgery may compromise ability to administer chemo, which is extremely important in SCLC

Trial	Cycle #	Completed Rx	Modified	Never Started
ALPI	3 cycles	69%	51%	9%
IALT	3-4 cycles	NR*	NR	7.8%
BR 10	4 cycles	50%	NR	6%
CALGB	4 cycles	85%	35%	3%
ANITA	4 cycles	NR**	NR**	9.6%
JLCRG	2 years	61%	NR	3%

NR-not reported

* 74% of patients received 240mg/m² of cisplatin

** Median relative dose intensity* vinorelbine – 59%, cisplatin – 89%

Where are We Now? Will We Get More Information?

- SCLC numbers are decreasing
- Very limited SCLC accounts for <5%, typically <1 patient per year at most institutions
- Prospective randomized trial is infeasible
 - would require more than worldwide participation for yrs
 - many patients and physicians would resist randomization to surgery or not
- For now, surgery remains an option in rare, well-selected patients; benefit from surgery unclear

If you knew someone had a very early stage small cell lung cancer, would you recommend surgery?

How do you manage patients post-operatively after they have undergone surgery for a very limited small cell lung cancer?

Why is the incidence of small cell lung cancer declining over time?

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