CYBERKNIFE WITH INTENT TO CURE FOR STAGE I-II LUNG CANCER:

TUMOR CONTROL, SURVIVAL, AND COMPLICATIONS AT ST. LOUIS CYBERKNIFE | SSM HEALTH CANCER CARE

A retrospective look at Stage I and II lung cancer patients treated at St. Louis CyberKnife has offered invaluable information and yielded excellent outcomes which are comparable to current published data. Dr. John Bedwinek, radiation oncologist with SSM Health Cancer Care and St. Louis CyberKnife, led the efforts to collect data from 2007 through 2015 on non-small cell lung cancer patients treated with CyberKnife with intent to cure. 150 patients were identified and 191 tumors were treated (multiple primaries). We looked at local control, survival, and complications.

Overall Findings

1 Local control is excellent at 96% for T1 disease and 82% for T2 disease. This is comparable to other SBRT series and to surgical series.

2 Disease-free survival and overall survival are also in line with other SBRT series. Overall survival is less than surgical series because most of our patients have significant co-morbidities which is the reason they were treated with CyberKnife instead of surgery.

3 Overall chest wall complication rate is 2.6% (4/150). If tumor is abutting the chest wall, it is 6% (4/65). Other SBRT series report much higher chest wall complication rates (20-30%) for tumors abutting the chest wall.

4 Symptomatic radiation pneumonitis rate is 4.6% (7/150).

5 CyberKnife offers an important lung cancer treatment option especially for patients with inoperable or surgically complex tumors, those who are at high risk for post-operative complications, or those who seek an alternative to conventional surgery.

“No case is typical. Results will vary by patient and there is no guarantee other patients will experience these results.”
Pre-Treatment

4 Years Post-Treatment

Key Advantages of CyberKnife SBRT for Lung Cancer

▶ Treats patients in five or fewer visits, depending on tumor size, volume, and location

▶ Constantly corrects for patient/tumor movement throughout treatment, ensuring radiation beams are always locked on tumor during treatment

▶ Respiratory tracking feature requires no breath-holding or respiratory gating by patient

▶ Reaches tumors from virtually unlimited directions with robotic mobility

▶ Enables clinicians to maximize and conform the dose to the tumor target while limiting radiation exposure to surrounding healthy tissue

▶ Outpatient procedure, little or no recovery time and minimal side effects

▶ Requires no anesthesia

▶ Allows for an immediate return to normal activities

St. Louis CyberKnife

SSM Health | Cancer Care

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