

# SBRT and HSRT Program at WRH

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# Lung SBRT Case

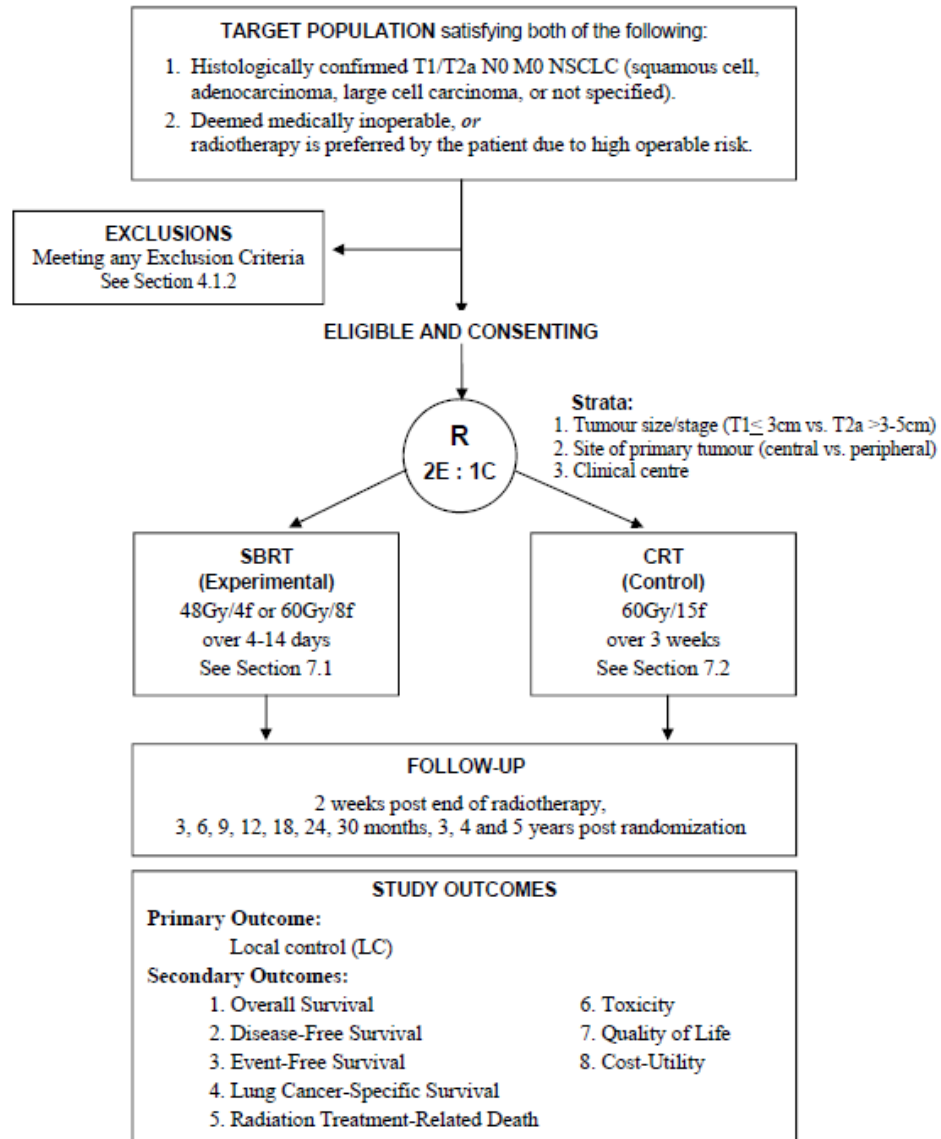
- **81-year-old lady with presumed non-small cell lung cancer in the left lingula that had doubled in size on CT scan over one year.**
- **PET scan from May 1, 2015 showed SUV 10.5 in the left lingula nodule that measured 1.2 x 1.6 cm in size. There was no evidence of any distant or lymph node metastases.**
- **Long history of severe COPD, chronic bronchitis and emphysema. On home oxygen all the time.**
- **Multiple hospital admissions for COPD exacerbations.**
- **Not candidate for biopsy or surgery.**

# SBRT Background

- **According to our 2010-2015 preliminary planning of Radiation Oncology Program, we should develop Stereotactic Body Radiation Therapy (SBRT) in Windsor before the 2015-2016 fiscal year.**
- **This planning was delayed due to an inappropriate recommendation against the SBRT in our relatively small program by an expert external review in 2011.**
- **Since then almost all other programs in Ontario have developed SBRT despite their size.**
- **But....we have been referring Windsor patients to London, Hamilton and even Toronto for SBRT.**
- **We finally delivered the 1<sup>st</sup> SBRT to a lung cancer patient in October 2015 and the 1<sup>st</sup> HSRT to an oligo brain mets patient in 2018.**

# LUSTRE trial

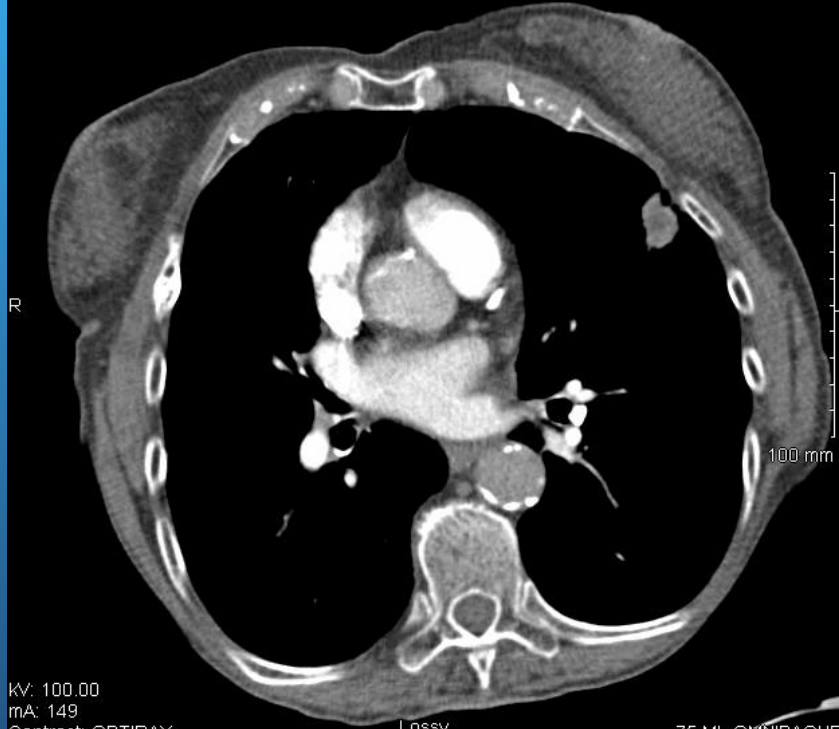
## STUDY SCHEMA



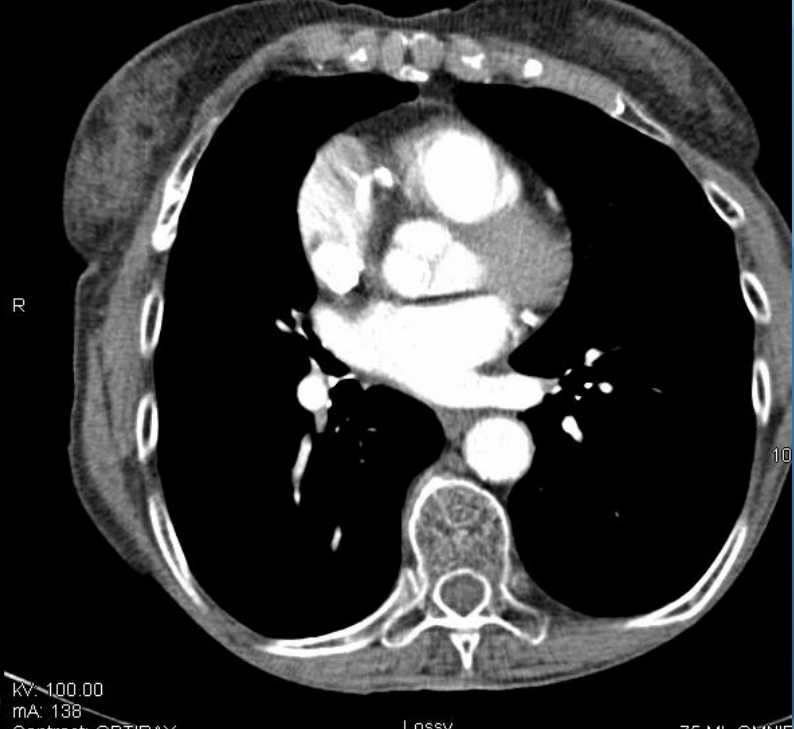
Planned Sample Size: 324 Patients (216 SBRT, 108 CRT)

# Pre- and Post-SBRT CT

08-Sep-2015 13:37  
Image: 55



29-Dec-2015 13:48  
Image: 55



KV: 100.00  
mA: 149  
Contrast: OPTIRAY  
Tilt: 0.00  
Slice: 3.00 Loc: 135.00

Lossy

75 ML OMNIPAQUE  
W: 500 L: 50  
Filter: None Fact: 0

P

KV: 100.00  
mA: 138  
Contrast: OPTIRAY  
Tilt: 0.00  
Slice: 3.00 Loc: 171.50

Lossy

75 ML OMNIF  
W: 40  
Filter: None

P

CT: 8 weeks before and after SBRT

# Thank you!

## References:

1. Pan M. Case of a Long-Time Survivor with Recurrent Multiple Brain Metastases from Lung Cancer: Terminal Stage Cancer or Chronic Disease. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7328698/> DOI: 10.7759/cureus.8378
2. Pan M. Radionecrosis and Complete Response after Multiple Reirradiations to Recurrent Brain Metastases from Lung Cancer over 10 Years: Is There a Limit? Adv Radiat Oncol, 2021 Jun 2; 6 (5): 100733. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8273226/> DOI: 10.1016/j.adro.2021.100733
3. Doupnik N, Hirmiz K, Hussein A, Agapito J, Pan M. Early-Stage Non-Small Cell Lung Cancer Stereotactic Body Radiation Therapy Outcomes in a Single Institution. 2022 Feb 3. Cureus 14(2): e21878. Cureus Journal of Medical Science. Available from doi: 10.7759/cureus.21878