SBRT for Non-Small Cell Lung Cancer

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1. Epidemiology of Lung cancer
   a. Incidence of lung cancer in the US in men and women
   b. Risk factors and presentation of lung cancers

2. Evaluation of Lung cancer patients
   a. Recommend radiologic evaluations
   b. Staging of Non-small cell lung cancer

3. Lung cancer screening
   a. Mayo project evaluating CXR
   b. National Lung Cancer Screening Trial evaluating CT scans

4. Treatment options for early stage lung cancers
   a. Surgery- lobectomy
   b. Radiation- Standard fractionation vs. SBRT

5. SBRT definitions and guidelines
   a. Definitions QA
   b. Personnel responsibilities
   c. SBRT planning
      i. Tumor motion and immobilization
      ii. Target volumes

6. SBRT dose
   a. BED formula
      i. Tumor response with BED < or ≥ 100: Japanese multi-institutional study, 2004
   b. Phase I dose escalation, 2005

7. Local control and Survival with SBRT in inoperable non small cell lung cancers
   a. Phase I/II 48 Gy in 4 fractions, 2005
   b. RTOG 0236, 2009

8. Toxicity of SBRT in inoperable non small cell lung cancers
   a. RTOG 0236, 2007

9. Results in operable non small cell lung cancers
   a. Phase II, 2010

10. Future Directions