Appendix Table C8. Outcomes and interventions of studies that address Key Question 2

| Study | Study Outcomes | Interventions |
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| Chen-2012, #4554 | **Study Objective:**  To evaluate outcomes of SBRT in potentially operable patients with primary  stage I NSCLC  **Primary outcome:**  NR  **Definition:**  NA  **Secondary outcome(s):**  NR  **Definitions:**  NA  **List of outcomes:**  OS, LCT  **Cause of death:**  Total: 12 (30%)  Unrelated to lung cancer: 10 (83%)  Related to lung cancer: 2 (17%)  **Length of FU:**  Median 44 (12-72) mos | **Intervention name:**  SBRT  **Vendor name:**  Cyberknife (Acurray Inc., Sunnyvale, CA)  **Dose/frequency/details:**  Prescribed dose: 50 Gy (42-60 Gy) to the PTV 80% isodose line  3 frs  Mean 7 days (5-11 days)    **Technical details:**  Beam energy NR  **Treatment Intention:**  Curative  **Follow-up and Evaluation Criteria:**  PET/CT scans at 3 mos intervals after SBRT  Biopsy required to confirm progression |
| Iwata-2010, # 1747 | **Study Objective:** To analyzed the safety and efficacy of high-dose proton therapy and carbon-ion therapy applied to stage I NSCLC  **Primary outcome:** NR  **Definition:** NA  **Secondary outcome(s):** NR  **Definitions:** NA  **List of Outcome(s):** OS, DSS, Local control, Toxicity  **Cause of death:** NR  **Length of FU:** All patients observed for a minimum of 1.5 years or until death. Median duration of follow-up was 35.5 (18-66) months for living pts & 30.5 (4-66) months for all pts. | **Intervention name:**  PBRT  **Vendor name:**  Synchrotron (Mitsubishi Electric Corporation, Kobe, Japan  3-D Rx planning system ((FOCUS-M, CMS, St. Louis, Mo and Mitsubishi Electric  Corporation)  **Dose/frequency/details:**  PBRT 80Gy:  20 fractions,  BED 10(Gy): 112  PBRT 60 Gy:  10 fractions  BED 10(Gy): 96  **Technical details:** Ptswere treated with 150-MeV proton beams  **Treatment Intention:** NR  **Follow-up and Evaluation Criteria:**   * After Rx, pts FU at 1.5, 3, 4.5, 6, 9, and 12 months during the 1st yr, at intervals of 3 months in the 2nd yr, and at 6-month intervals in the 3rd yr. * CT, tumor marker, Brain MRI and FDG-PET were used to monitor tumor progression. * Local responses was assessed according to the modified WHO response evaluation criteria. * Toxicities were evaluated with the CTCAE version 3.0. * Medically inoperability defined as pts with poor pulmonary function (vital capacity <75% or ratio of FEV 1 to forced vital capacity <60%), a history of major CVD, severe DM, advanced age (80 years old), or other debilitating conditions that preclude surgery. |
| Lagerwaard-  2011, #2122 | **Study Objective:**  To evaluate outcomes of SBRT in potentially operable patients with primary  stage I NSCLC  **Primary outcome:**  NR  **Definition:**  NA  **Secondary outcome(s):**  NR  **Definitions:**  NA  **List of outcomes:**  OS, LCT, toxicity  **Cause of death:**  Total: 34 (19%)  Unrelated to lung cancer: 12 (35%)  Related to lung cancer: 14 (41%)  Unknown: 5 (15%)  **Length of FU:**  Median 32 mos | **Intervention name:**  SBRT  **Vendor name:**  NR  **Dose/frequency/details:**  Prescribed dose: 60 Gy to the PTV 80% isodose line  BED: > 100 Gy for all fractionations  3, 5, or 8 frs  2 weeks    **Technical details:**  Beam energy NR  **Treatment Intention:**  Curative  **Follow-up and Evaluation Criteria:**  CT scans at 3, 6, 12 mos after SBRT  FDG PET only if relapse suspected  Toxicity assessed (criteria NR) |
| Onishi-2011,  #2802  (longer FU to  Onishi-2007,  #2803) | **Study Objective:**  To evaluate high-dose SBRT for stage I NSCLC in patients who were  medically operable but refused surgery  **Primary outcome:**  OS, CSS, LCT, toxicity  **Definition:**  NR  **Secondary outcome(s):**  NR  **Definitions:**  NA  **List of outcomes:**  OS, CSS, LCT, toxicity  **Cause of death:**  NR  **Length of FU:**  Median 55 mos | **Intervention name:**  SBRT  **Vendor name:**  NR  **Dose/frequency/details:**  Prescribed dose: 45-72 Gy at the PTV isocenter  BED: Median 116 (100-141) Gy  3-10 frs  Consecutive days or every other day  **Technical details:**  4- and 6-MeV beam energy  **Treatment Intention:**  Curative  **Follow-up and Evaluation Criteria:**  First FU at 4 weeks, then every 1-3 mos thereafter  Chest CT scans every 3 mos for first year then every 4-6 mos thereafter  Toxicity assessed according to CTCAE v.2.0 |
| Shibamoto -2012,  #4629 | **Study Objective:** To report a multi-institutional study of SBRT in inoperable  and operable patients with histologically confirmed stage I NSCLC  **Primary outcome:** LC at 3-years follow-up  **Definition:** Calculated from the start of SBRT  **Secondary outcome(s):** OS, CSS  **Definitions:** Calculated from the start of SBRT  **List of Outcome(s):**  OS, CSS, LCT, Toxicity  **Cause of death:**  Dead: 65 (36%)  NR by operability  **Length of FU:**  36 months  NR by operability | **Intervention name:**  SBRT  **Vendor name:**  Novalis image-guided system (Varian Medical Systems, Palo Alto, CA)  CLINAC 23EX or 21 EXS (Varian)  Eclipse v.7.5.14.3 (Varian)  BRAINSCAN v.5.31 (BrainLAB, Feldkirchen, Germany)  Pinnacle3 (Philips, Madison, WI)  **Dose/frequency/details:**  Hypofractionated SBRT  Total dose: 44-52 Gy to 90% of the isodose line of PTV in 4 frs for 9-21 days  **Technical details:** 6-MV photons  **Treatment Intention:** Curative  **Follow-up and Evaluation Criteria:**   * All time intervals were calculated from the start of SBRT * CT scans of chest and upper abdomen at 2-months intervals up to 6 months, every 2-4 months thereafter * Toxicity: CTCAE v3.0 criteria during and up to 3 months after RT |
| Takeda-2009, #3700 | **Study Objective:**  To analyze clinical outcomes of SBRT for patients with stages IA and IB NSCLC  **Primary outcome:**  NR  **Definition:**  NA  **Secondary outcome(s):**  NR  **Definitions:**  NA  **List of outcomes:**  OS, CSS, LCT, toxicity  **Cause of death:**  NR  **Length of FU:**  31 (10-72) mos | **Intervention name:**  SBRT  **Vendor name:**  XiO treatment planning system, V.4.2 or v.4.3, CMS, St. Louis, MO  Linear accelerator NR  **Dose/frequency/details:**  Prescribed dose: 50 Gy to the 80% isodose line  10 Gy per fraction  5 fractions  **Technical details:**  Beam energy NR  **Treatment Intention:**  Curative  **Follow-up and Evaluation Criteria:**   * Monthly for first 6 mos, with chest X-ray * CT scans at 1 and 3 mos after SBRT, then at 3-mos intervals during first 2 years * FU interviews and CT scans at 4-6 mos intervals after 2 years * Toxicity assessed according to CTCAE v.3.0 |