50Gy in 5 fractions lung.

Watch tumor movement to decide if gating for lung or free breathing. Ct ave versus mip.

50% at 2cm sheet (lung SBRT)

Lung SBRT sheet/dosimetry/LU002, 50% at 2cm if true lung old RTOG

Spinal cord

Dmax <20Gy

Total lung

V30<7%

Mean lung dose <6Gy

V5<30%

V10<17%

V15 lung <35%

V20<12%

Ipsilateral lung

v30<15%

V15<35%

v10<35%

v20<25%

ipsilateral mean lung <9Gy

trachea V35<1cc

bronchial tree

V35<1cc, dmax 38Gy

32Gy <5cc

Small bronchioles max 20Gy

Hilar major vessels

V40<1cc, dmax 56Gy

Other chest great vessels

V40<1cc, dmax 56Gy

Esophagus

V30<1cc, dmax <35Gy

Heart

V40<1cc, dmax <45Gy

Pericardium v20<5cc, dmax <45Gy

Brachial plexus

V30<0.2cc, dmax < 35Gy

Spinal cord v20<1cc, dmax 25Gy (20Gy preferable)

Chest wall

V30<30cc

V40Gy<5cc

V40<0.2%

Dmax 43-50Gy (or max 105%)

Skin

V30<50cc

Stomach

Max 20-30Gy

25Gy<5cc

18Gy<10cc

Spleen

25Gy<5cc

?max <35Gy

Liver

21.5Gy < 700cc

If MULTIPLE lung lesions remember: PFTs, lung dlco 60%, v20<15-17% and mean lung dose <9Gy if multiple lung lesions for normal lung constraints

Adrenal SBRT dosimetry (5 fractions)

duodenum max 26Gy, LU002 max 26Gy, 18Gy < 5cc, 12.5-14.5Gy < 10cc

bowel max 30Gy, 20Gy < 30cc (if can go lower 26Gy or 21.5Gy was median and low end of observed dose),

Stomach max 26Gy, V20<30cc

Spinal cord max 20Gy or less

Ipsilateral Right kidney 15Gy <20% (or lower 11Gy <20%)

Kidneys v10Gy < 10%

Mean bilateral kidneys <10Gy

Bilateral kidneys LU002 18Gy< 200cc, 23Gy <2/3 volume

Liver mean 10Gy, LU002 21Gy<700cc

Skin max 38Gy

|  |  |  |  |
| --- | --- | --- | --- |
| **Parallel Tissue** | **Constraint\*** | **Per Protocol (cc or %)** | **Notes** |
| Liver | CV21Gy[cc] | >700 | To preserve basic liver function |
| Combined Kidneys\*\* | CV18Gy[cc] | >200 | To preserve basic kidney function |

\*A complementary volume (CV) or “cold volume” is the volume of tissue receiving the indicated dose or less. CVxGy[cc] are complementary or cold volume objectives for parallel tissues, where "xGy" is the threshold dose and the critical volumes are displayed in the table. To use these objectives as conventional DVH-based inverse planning objectives, the planner can convert using the total structure volume and the equation Vthreshold dose[%] < [1 - (Vcritical / Vtotal)] x 100% (note the change to "less than"). For example, for the CV21Gy[cc] metric and a total liver volume of 2000cc, the corresponding maximum volume objective V21Gy[%] should be kept less than [1 - (700 / 2000)] x 100%, or < 65%.