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| **Step** | **Problem** | **Possible Reason** | **Solution** |
| 1.3 | CT image is tilted. | Mouse head is tilted while CT image is being taken. | Align mouse patient’s head so that ears are horizontally level with robotic stage. Tape head down to immobilization bed. |
| 1.3 | CT image is fuzzy. | Mouse may have moved while CT image is being taken. | Increase isoflurane gas anesthesia while mouse is on the immobilization bed. |
| 1.4 | Difficulty in identifying ROI. | Anatomical region may be difficult to target using cranial landmarks alone (i.e. skull bone). | Use intrathecal iodine contrast (described in Ford *et al.*, 2011) to enhance visualization of brain ventricles. Identify ROI in relation to brain ventricle position. |
| 1.5 | Mouse patient does not awaken following irradiation. | Overdose on anesthesia. | Titrate anesthesia. Lower amount of anesthesia, but enough to keep patient still during irradiation treatment. |
| 1.8 | Irradiated region is much larger than ROI. | Radiation beam diameter. may be too big. | Reduce collimator size. |
| 1.8 | Irradiated region on GAFchromic film is irregular (not spherical). | Robotic stage may not be rotating smoothly. | Calibrate robotic stage rotation. |
| 2.18 | ϒH2Ax immunostaining does not match desired ROI. | Focal irradiation was not targeted correctly, or is not consistent. | Use additional anatomical landmarks (bone, brain ventricle, etc.) to align radiation beam. |

1. **Troubleshooting Table**