DQA Using Film

# Calibration

1. Put on gloves.
2. Obtain the film (most likely a new batch) from the film developer room.
3. Turn on the scanner and plug into the Delta4 computer. Allow to warm up for at least half an hour.
4. Use a guillotine to cut an unexposed film into around seven strips.
   1. Cut off only one strip.
   2. Scan both pieces of film. This is the **unexposed image**. Leave the strip on the scanner until the next calibration.
   3. Cut the remaining strips.
   4. Scan all strips. These are the **calibration fragments prior to irradiation**. Again, leave the first strip on the scanner.
5. Irradiate all but one of the strips. The smallest dose should be zero, and the largest ~20 percent greater than the largest dose of interest.
   1. Place some solid water for backscatter on the linac table. 10 cm works well.
   2. In Service Mode in the linac software, set the field size to 25 cm × 25 cm.
   3. For each strip:
      1. Center the strip on the solid water. You may want to use a frame to ensure consistent positioning of all strips.
      2. Place solid water on top of film according to energy.
      3. Align the film to 100 SSD (reference conditions).
      4. In Service Mode of the linac software, deliver the desired dose to the strip. You will need to convert dose to MUs.
6. After the waiting window\*, scan all fragments. These are the **calibration fragments after irradiation**.

\*Recommended waiting window is 24 ± 2 h.