

## Sequences for Head and Neck CT and MRI staging

These are the two protocols that are widely used for CT staging of the Head and Neck cancers and proved to be very effective in obtaining the optimal images.

### CT scan Protocols

#### Neck and Chest Protocol- Type 1

##### Contrast- 100 mls:

Intravenous contrast enhanced multislice acquisition from skull base to posterior costophrenic recess.

For Multidetector CT scanners, the current protocol is 100ml of 300mgI 2/ml contrast medium at 1 ml/s.

Start scan acquisition at end of injection at 100s.

Images should be acquired with the patient in quiet respiration so that the vocal cords are abducted and after a swallow at about 20 seconds before starting the scan acquisition to minimize the need for swallowing and hence movement during the data acquisition.

Reconstruction of 3 - 5mm axial images through the neck and 5 mm axial images through the chest with review of source 0.5 – 1mm axial acquisition.

## Neck and Chest Protocol- Type 2

### Injection –Dual Phase: 140 mls

Phase 1inj: 70mls @ 3mls/sec= 23 secs

### Chest: Hand position: Arms. Up

1. PA Topogram
2. Pre-monitoring at Arch of aorta. (100 HU)
3. Start the injection. Phase 1inj: 70mls @ 3mls/sec
3. Move the position to start of the chest
4. Chest delay-7 secs and scan down from the apex of the lungs to the liver. ( include liver).

### **Now the Neck....**

Hand position: Arms down . Move to the neck position.

1. Start the second injection immediately at the end of first injection. **(70mls@1ml/sec**
2. Scan after the **end of** second injection, so the scan starts approx. 90- 100 secs after the first injection. ( 30sec from phase-1 and 70 sec phase- 2 contrast injections) .
3. Scan from the base of the skull ( EAM) to the level of the clavicle ( not the carina.)