

Broncus Medical® InterVapor® CT Scan Protocol

InterVapor® treatment is based on a quantitative analysis of a CT scan to establish a treatment plan referred to as the InterVapor Personalized Procedure Program® or IP3. The following CT settings **MUST** be used to ensure an accurate tissue analysis. The analysis is used to establish the InterVapor dosage. If the settings are not correct, a rescan or reconstruction will be requested before completion of the CT analysis.

CT Parameters

1-2mSv Dose: For scanners **WITH** Iterative Reconstruction

Parameters	Siemens	Philips	Toshiba	GE
CTDIvol = 3.0mGy	Target 3.0mGy	Target 3.0mGy	Target 3.0mGy	Target 3.0mGy
Tube Current AEC Modulation	CareDose ON	Z-Dom/iDose ON	SURE IQ ON	Smart mA ON
kV Modulation	CarekV OFF	-	Sure kV OFF	-
kV	Range: 100-140	Range: 100-140	Range: 100-140	Range: 100-140
Pitch	Preferred range: 0.8-1.2	Preferred range: 0.8-1.2	Preferred range: 0.8-1.0	Preferred range: 0.9-1.375
Rotation Speed (Sec)	≤0.5	≤0.5	≤0.5	≤0.5
Iterative Reconstruction	SAFIRE/ADMIRE	IMR	ADIR 3D standard/First	VEO/ASiR
Iterative Strength	3	Routine 2	Standard	30-50
QCT Kernel	Q30 or Qr40 preferred	B preferred	FC17 preferred	Standard preferred
Slice Thickness	Range: 0.5 to 1.25mm	Range: 0.5 to 1.25mm	Range: 0.5 to 1.25mm	Range: 0.625 to 1.25mm Recon Mode: Plus
Slice Spacing	20% less than slice thickness preferred	20% less than slice thickness preferred	20% less than slice thickness preferred	20% less than slice thickness preferred
Contrast or Xenon	NONE	NONE	NONE	NONE

3-4mSv Dose: For scanners **WITHOUT** Iterative Reconstruction

Parameters	Siemens	Philips	Toshiba	GE
CTDIvol	Target 6.0mGy	Target 6.0mGy	Target 6.0mGy	Target 6.0mGy
Tube Current AEC Modulation	CareDose ON	Z-Dom/iDose ON	SURE IQ ON	Smart mA ON
kV Modulation	CarekV OFF	-	Sure kV OFF	-
kV	Range: 100-140	Range: 100-140	Range: 100-140	Range: 100-140
Pitch	Preferred range: 0.8-1.2	Preferred range: 0.8-1.2	Preferred range: 0.8-1.0	Preferred range: 0.9-1.375
Rotation Speed (sec)	≤0.5	≤0.5	≤0.5	≤0.5
QCT Kernel	B35 or Br40 preferred	B preferred	FC17 preferred	Standard preferred
Slice Thickness	Range: 0.5 to 1.25mm	Range: 0.5 to 1.25mm	Range: 0.5 to 1.25mm	Range: 0.625 to 1.25mm Recon Mode: Plus
Slice Spacing	20% less than slice thickness preferred	20% less than slice thickness preferred	20% less than slice thickness preferred	20% less than slice thickness preferred
Contrast or Xenon	NONE	NONE	NONE	NONE

If the recommended settings cannot be used, or if you have any questions or concerns, please contact us prior to acquiring the patient CT scan by email at ip3@uptakemedical.com.

Broncus Medical® InterVapor® CT Scan Protocol

Patient Positioning

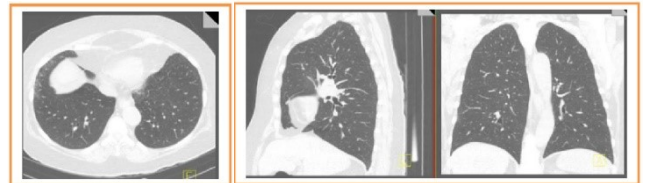
- Place patient in a supine position, arms positioned comfortably above the head in a head-arm rest, lower legs supported.
- Using the laser positioning lights, line up the patient so the chest is iso-center (in the middle: left-right; up-down) of the CT gantry. **Correcting an off-center patient during image reconstruction is not acceptable. Proper positioning must be ensured prior to scanning.**
- Move the table so the patient is in the correct position for a chest CT scan.
- Once the patient is comfortably and properly positioned, remain in the scanner room and work with the patient to rehearse the breathing instructions used during CT acquisition several times. **It is important that the patient fully understands the breath hold and scanning procedure and that all concerns are addressed prior to performing the CT scan.**



Scan Coverage

CT scan must include the entire lungs, but ONLY the lungs. Start the scan precisely at the apex of the lungs and stop it once the scan is through the base of the lungs as shown in the Figure.

- The DFOV should tightly fit the TLC lung for the QCT reconstruction as shown in the Figure.
- The same DFOV should be used for the TLC and RV scans.
- The same DFOV should be used for all time points of a given patient.



Breathing Instructions

The CT scan must be performed during breath hold at full inspiration (TLC). It is important that the patient understands the breath hold and scanning procedure prior to performing the scan. Below are recommended breathing instructions:

“For this scan, I am going to ask you to take a couple of deep breaths in and out before we have you breathe all the way in and hold your breath.”

“Ok, let’s get started, take a deep breath in” (watch chest to ensure a deep breath in)

“Let it out” (watch chest to ensure air is out)

“Take a deep breath in” (watch chest to ensure a deep breath in)

“Let it out” (watch chest to ensure air is out)

“Now breathe all the way IN...IN...IN” (watch chest to ensure a deep breath in as far as possible)

“Keep holding your breath – DO NOT BREATHE!”

At end of scan or practice: - **“Breathe and relax”**

Deidentification – Declaration of Confidentiality

All identifying information such as patient name and date of birth will be removed by the CT transfer software before it is transferred to Broncus Medical. If preferred, patient specific information may be removed earlier. Other information (such as UID, scanner model, slice thickness, kernel, and kVp) should remain. Broncus Medical maintains the confidentiality of all received information for privacy.