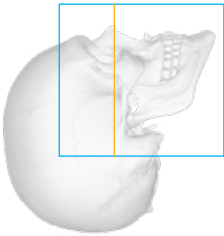
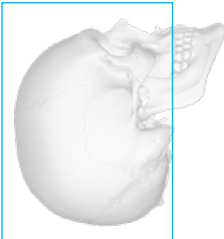
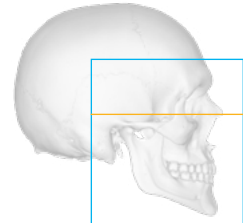
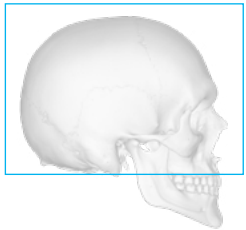


Orthognathic, Reconstruction, and Cranial Protocols

This protocol describes the guidelines for Computerized Tomography (CT) scans and Cone Beam Computerized Tomography (CBCT) scans for Acumed Digital Surgery™. Use the following scan parameters or the closest approximation possible.

CT Scanners		
Specifications	Parameters	
Pixel Size	0.65 mm or less	
Slice Thickness	Maximum 1.00 mm *up to 1.5 mm is acceptable with approval	
Slice Increment	Less than or equal to slice thickness	
Slice Orientation	Axial slice orientation (original/primary/axial)	
Algorithm	Bone or high-resolution	
Matrix	512 x 512	
Pitch	Less than or equal to 1	
Patient Position	Supine, head first into the gantry Ensure the Frankfurt Plane is vertical, straight, and centered to the scanner lasers	
Gantry Tilt	0°	
Case Type	Orthognathic / Reconstruction	Cranial
Field of View (FOV)	Chin to glabella	Entire skull
		
	*Blue is recommended FOV; orange shows Frankfurt Plane Image is oriented for patient position in scanner	
Scan Date	Scan date must be within 2.5 months of scheduled surgery date	

CBCT Scanners		
Specifications	Parameters	
Voxel Size	0.2–0.4 mm	
Slice Orientation	Axial	
Algorithm	Bone or high-resolution	
Matrix	Machine default	
Patient Position	Natural head position with Frankfurt Plane aligned parallel to the floor	
Case Type	Orthognathic / Reconstruction	Cranial
Field of View (FOV)	Chin to glabella	Entire skull
		
	*Blue is recommended FOV; orange shows Frankfurt Plane Image is oriented for patient position in scanner	
Scan Date	Scan date must be within 2.5 months of scheduled surgery	

Data Collection / Upload

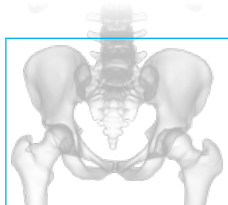
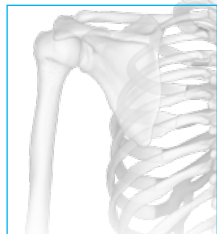
- ▶ Do not erase patient name and ID
- ▶ Save the images as multiple slices in an uncompressed standard DICOM format
- ▶ Data cannot be modified or formatted; do not alter orientation or slice thickness

- ▶ Once data has been exported, zip and upload to Acumed Digital Surgery portal **digitalsurgery.acumed.net**
- ▶ Physical data can be mailed to
Acumed LLC
Attention: Acumed Digital Surgery
3885 Arapaho Road
Addison, TX 75001

For questions or concerns, please contact **CMF-digitalsurgery@acumed.net** or **945-341-2012**



Graft Protocols

CT Scanners		CBCT Scanners	
Specifications	Parameters		
Size	Pixel Size: 0.65 mm or less	Voxel Size: 0.2–0.4 mm	
Algorithm	High-resolution, IV contrast is required for arterial mapping	High-resolution, use specialized metal artifact re-duction algorithms if hardware is present	
Voltage/Amperage	80 to 140 kVp (kilovolt peak) and 10 to 1000 mA	120 kVp and 1–15 mA, depending on the machine and patient size	
Pitch	Less than or equal to 1	N/A	
Slice Increment	Less than or equal to slice thickness	N/A	
Slice Thickness	Maximum 1.0 mm *2.0 mm is acceptable with approval		
Slice Orientation	Axial (original/primary/axial)		
Patient Position	Supine and legs/arms straight		
Gantry Tilt	0°	N/A	
Matrix	512 x 512	Machine default	
Case Type	Fibula Graft	Iliac Crest Graft	Glenoid Bone Grafting
Field of View (FOV)	Knee to ankle 	Iliac crest to ischium  *Blue is recommended FOV	Clavicle to mid humerus 
Scan Date	Scan date must be within 3 months of scheduled surgery		

Scanning Tips

- ▶ Instruct the patient to remain still and avoid movement, such as tilting or turning the head
- ▶ Remove any non-fixed metal prosthesis, jewelry, or any other object that might interfere with the region to be scanned
- ▶ Ensure the patient's head is in a neutral, centered, CR position, with the condyles positioned optimally within the glenoid fossa
- ▶ Avoid using a bite block if possible
- ▶ To ensure accurate soft tissue data, avoid having the patient in a chin cup

