

Radiography Protocols – Adult

For pediatric protocols, refer to Page 4 “Radiography Protocols – Pediatric”.

For Bone Survey examinations, refer to Pages 5-6 “Radiography Protocols – Bone Survey”.

If you have a question regarding a radiography protocol, consult the radiologist on duty.

Page numbers are for Bontrager KL and Lampignano JP, *Bontrager’s Handbook of Radiographic Positioning*, 8th Edition, Elsevier, 2014.

Examination	Views (as listed in Bontrager’s Handbook, 8 th Ed)	Page
Abdomen Series	AP Abdomen (KUB)	272
	and Erect AP Abdomen	273
AC joints	Acromioclavicular (AC) joints	97
Ankle	AP Ankle	118
	and Lateral Ankle	122
	and AP Mortise	120
Arm (Humerus) - routine	AP Humerus	67
	and Rotational Lateral Humerus	69
Arm (Humerus) - trauma	AP Humerus	67
	and Trauma Lateral Humerus	71
Bone Age	PA Hand (Left)	33
Cervical Spine – routine	AP for C1-C2 (Odontoid)	174
	and AP Axial for Cervical Spine	177
	and Lateral Cervical Spine	180
	and Obliques, Cervical Spine	178
Cervical Spine – Trauma	Patient in hard collar & on backboard for Lateral, AP, and Odontoid; once hard collar is removed complete series taking Obliques, upright Lateral and Odontoid (if not obtained earlier).	
Chest	PA Chest	4
	and Lateral Chest	5
Clavicle	AP and AP Axial Clavicle	92
Coccyx	AP Coccyx	202
	Lateral Coccyx	205
Elbow	AP Elbow	54
	and Oblique Elbow (Internal and External)	57
	Lateral Elbow	59
Facial Bones	Facial Bones – PA (Caldwell)	242
	and Parietoacanthial (Waters)	240
	and Submentovertex (SMV) Skull	232
	and Facial Bones – Lateral	238
Femur	AP Femur	150
	Lateral Femur	151
Finger – Digits 2 - 5	PA Hand	33
	and PA Oblique Finger	24
	and Lateral Finger	26
Finger - Thumb	PA Hand	33
	and AP Thumb	27

	and Lateral Thumb	30
Foot	AP Foot	108
	and AP Oblique Foot	109
	and Lateral Foot	111
Forearm	AP Forearm	51
	Lateral Forearm	52
Hand	PA Hand	33
	and PA Oblique Hand	35
	and Lateral Hand (“fan” fingers)	36
Hands – rheumatoid	PA Hand (Bilateral)	33
	and Bilateral Oblique (Norgaard Method)	38
Hip - routine	AP Pelvis	162
	and Lateral Hip (Non-trauma)	157
Hip - trauma	AP Pelvis	162
	and Lateral Hip (Trauma method)	160
Knee – routine	AP Knee	128
	and Lateral Knee	131
Knee - Trauma	AP Knee	128
	and Lateral Knee (Cross-table) (Rotate in PACS)	
	and AP Oblique Knee (Medial and Lateral)	129
Leg (Tib/Fib)	AP Leg (Tibia-Fibula)	125
	and Lateral Leg (Tibia-Fibula)	126
Lumbar	AP (PA) Lumbar Spine	190
	and Lateral Lumbar Spine	192
	and Lateral L5-S1 Lumbar Spine	193
Mandible	Mandible – PA	253
	and AP Towne (include mandible)	226
	and Mandible – axiolateral obliques	255
	OR Panorex only (if available)	
Mastoids	No routine radiographs (perform CT)	
Nasal Bones	Facial Bones – Parietoacanthial (Waters)	240
	and Nasal Bones - Lateral	250
Orbits (Sinuses + Rhese)	PA Paranasal Sinuses (Caldwell)	263
	and Paranasal Sinuses (Waters)	264
	and Lateral Paranasal Sinuses	261
	and Optic Foramina (Rhese)	245
Pelvis	AP Pelvis	162
Patella	PA Patella	137
	Lateral Patella	138
	Patella – Tangential Projection (Settegast)	141
Ribs	AP or PA Ribs – Above Diaphragm	217
	and AP Ribs – Below Diaphragm	218
	and Anterior Oblique Ribs – PA	220
	and Posterior Oblique Ribs - AP	221
Sacroiliac (SI) Joints	Sacroiliac Joints AP Axial	207
	and Sacroiliac Joints Posterior Obliques (Bilateral)	208
Sacrum	AP Sacrum	201

	and Lateral Sacrum (and Coccyx)	204
Scapula	AP Scapula	94
	and Lateral Scapula	95
Scoliosis	Scoliosis Series AP Ferguson	197
Shoulder - routine	AP Shoulder [external rotation]	73
	and Posterior Oblique (Grashey)	81
	and Inferosuperior Axial	75
Shoulder - trauma	AP Shoulder [internal rotation]	73
	and Posterior Oblique (Grashey)	81
	and Lateral Shoulder Trauma Projection	88
Shunt Series	AP Towne (Skull)	226
	and Lateral Skull	228
	and PA Chest (overlap exposure with skull)	4
	and AP Abdomen (overlap exposure with chest)	272
Sinuses	PA Paranasal Sinuses (Caldwell)	263
	and Parietoacanthial (Waters)	264
	and Lateral Paranasal Sinuses	261
Skull	AP Towne	226
	and Lateral Skull (bilateral)	228
	and PA Skull (Caldwell)	230
	and Parietoacanthial (Waters)	240
Soft Tissue Neck	AP Neck	
	and Lateral Neck	
Stent Graft Series	AP Abdomen (KUB)	272
	and Abdomen Dorsal Decubitus (Lateral)	276
	and Bilateral 30 Oblique Abdomen	
Sternoclavicular joints	No routine radiographs (perform CT)	
Sternum	Oblique Sternum	212
	and Lateral Sternum	213
Thigh (femur)	AP thigh	150
	Lateral thigh	151
TMJ	Bilateral tomographs with mouth open & closed	
Thoracic/Dorsal Spine	AP Thoracic Spine	186
	and Lateral Thoracic Spine	187
	and Lateral Cervicothoracic Spine (Swimmer's)	181
Toes	AP Toes	102
	and AP Oblique Toes	103
	and Lateral Toes	105
Wrist - routine	PA Wrist	40
	and PA Oblique Wrist	41
	and Lateral Wrist	43
	and [for trauma] PA Wrist – Ulnar Deviation	45
Wrist – Scaphoid	PA Axial Scaphoid (15° and 25° CR Angles)	46
Zygomatic Arches	Facial Bones – PA (Caldwell)	242
	and Facial Bones – Parietoacanthial (Waters)	240
	and Bilateral Zygomatic Arches – AP Axial	249
	and Zygomatic Arches – Bilateral (SMV projection)	246

Radiography Protocols – Pediatric

For any exams not listed here, refer to Pages 1-3 “Radiography Protocols – Adult”.

For Bone Survey examinations, refer Pages 5-6 “Radiography Protocols – Bone Survey” below.

If you have a question regarding a pediatric protocol, consult with the radiologist on duty.

Radiographic Routines Name	Follow Pediatric Protocol until age:	Bontrager’s Handbook Description	Page
Abdomen Series – routine survey	0 – 6 months	AP Pediatric Abdomen (KUB)	278
Abdomen Series – acute abdomen	0-3 years	AP Pediatric Abdomen (KUB) and Left Lateral Decubitus Abdomen	278 275
Abdomen Series – patient can stand	3 – 16 years	AP Pediatric Abdomen (KUB) and AP Erect Pediatric Abdomen	278 279
Abdomen for imperforate anus	Newborn	Cross-table prone abdomen; mark anal dimple with nipple marker	
Bone age	6 months and over	PA Left Hand	33
	Less than 6 months	AP pediatric lower limb	144
Cervical Spine	13	AP for C1-C2 (Odontoid)	174
		and AP Axial for Cervical Spine	177
		and Lateral Cervical Spine	180
Chest	3 years	AP Pediatric Chest	15
		and Lateral Pediatric Chest	17
Elbow	0-2 years	Pediatric AP Upper Limb	63
		and Pediatric Lateral Upper Limb	64
Hips/Pelvis	0 – 2 years	Pediatric AP and Lateral Hips	170
Knee	0 – 2 years	Pediatric AP Lower Limb	144
		and Pediatric Lateral Lower Limb	145
Lumbar spine	Add cone-down at age 13	AP (PA) Lumbar Spine	190
		and Lateral Lumbar Spine	192
		and Lateral L5-S1 Lumbar Spine	193
Skull	0-3 years	PA Caldwell	230
		and Lateral Skull	228

Radiography Protocols - Bone Surveys

Examination	Views (as listed in Bontrager's Handbook)	Page
Bone Survey - Adult	Bilateral AP Ribs Bilateral AP Shoulders Bilateral AP Humeri and Bilateral AP Femurs and AP Pelvis and AP Towne Skull and Lateral Skull and AP Thoracic Spine and Lateral Thoracic Spine and AP Lumbar Spine and Lateral Lumbar Spine and Lateral Cervical Spine	217 73 67 150 162 226 228 186 187 190 192 180
Bone Survey – Pediatric Non-Accidental Trauma; each anatomic region should be imaged with a separate radiographic exposure. Each extremity should be radiographed in at least the frontal projection.	Skull (frontal and lateral) to include cervical spine (if not completely visualized on the lateral skull) Thorax (AP, lateral, right and left obliques), to include sternum, ribs, thoracic and upper lumbar spine Abdomen, to include the pelvis (AP) Lumbosacral spine (lateral) Humeri (AP) Forearms (AP) Hands (PA) Femurs (AP) Lower legs (AP) Feet (AP)	
Bone Survey – Pediatric Skeletal dysplasia and syndromes	As above, but entire arms and legs can be exposed on a single film when the size of the child permits. In newborns and young infants, whole-body AP and lateral radiographs may be appropriate, but separate views of the skull (frontal and lateral), hands (posteroanterior (PA)), and feet (AP) are advisable. Lateral views of the feet and ankles may be useful in selected cases.	