

Contents

1	Imaging of Facial Cosmetic Surgery	1
1.1	Overview of Facial Cosmetic Materials and Their Imaging Features	1
1.2	Forehead Augmentation	5
1.3	Cheek and Nasolabial Fold Augmentation	6
1.4	Rhinoplasty	15
1.5	Lip Augmentation	25
1.6	Chin and Jaw Augmentation	26
	Further Reading	30
2	Imaging the Postoperative Orbit	33
2.1	Eyelid Weights	33
2.2	Palpebral Spring	34
2.3	Blepharoplasty	35
2.4	Orbital Wall Reconstruction and Augmentation	36
2.5	Orbital Decompression for Dysthyroid Orbitopathy	41
2.6	Dacryocystorhinostomy and Nasolacrimal Duct Stents	43
2.7	Strabismus Surgery	45
2.8	Glaucoma Surgery	47
2.9	Scleral Buckles	52
2.10	Keratoprotheses	55
2.11	Intraocular Lens Implants	56
2.12	Lensectomy	60
2.13	Pneumatic Retinopexy	61
2.14	Intraocular Silicone Injection	62
2.15	Enucleation, Evisceration, and Globe Protheses	63
2.16	Orbital Tissue Expanders	67
2.17	Orbital Exenteration	68
	Further Reading	71
3	Imaging the Paranasal Sinuses and Nasal Cavity After Surgery	75
3.1	Nasal Fracture Reconstruction (Posttraumatic Rhinoplasty)	75
3.2	Septoplasty	76

3.3	Inferior Turbinate Outfracture and Radiofrequency Treatment	78
3.4	Caldwell-Luc Procedure	79
3.5	External Ethmoidectomy	80
3.6	Functional Endoscopic Sinus Surgery	80
3.7	FESS Complications	85
3.8	Osteoplastic Flap with Frontal Sinus Obliteration	98
3.9	Frontal Sinus Cranialization	100
3.10	Paranasal Sinus Stents	103
3.11	Frontal Sinus Trephination	104
3.12	Decompression, Enucleation, and Osteotomy	105
3.13	Maxillectomy and Palatectomy	108
3.14	Maxillary Swing	114
3.15	LeFort I Osteotomy	116
	Further Reading	118
4	Imaging the Postoperative Scalp and Cranium	121
4.1	Occipital Nerve Stimulator	121
4.2	Tissue Expander	122
4.3	Temporal Fossa Implant	122
4.4	Mohs Micrographic Surgery and Skin Grafting	125
4.5	Rotational Galeal Flap Scalp Reconstruction	126
4.6	Free Flap Reconstruction of Complex Scalp Defects	126
4.7	Scalp Tumor Recurrence	128
4.8	Fiducial Markers	129
4.9	Absorbable Hemostatic Agents	130
4.10	Duraplasty and Sealant Agents	132
4.11	Burr Holes	135
4.12	Intracranial Pressure Monitor	138
4.13	Craniotomy	139
4.14	Cranioplasty	143
4.15	Autocranioplasty	147
4.16	Craniectomy and the Meningogaleal Complex	148
4.17	Tension Pneumocephalus	150
4.18	Entered Frontal Sinus, Entered Orbit, and Air Leak	150
4.19	Postoperative Hemorrhage and Hematomas	152
4.20	Postoperative Hygromas	155
4.21	Pseudomeningoceles	156
4.22	Bone Flap Resorption	157
4.23	Postoperative Infection	157
4.24	External Brain Tamponade	160
4.25	Sunken Skin Flap Syndrome	161
4.26	External Brain Herniation	162
4.27	Cranial Vault Reconstruction for Craniosynostosis	162

4.28	Encephalocele Repair	167
	Further Reading	168
5	Imaging the Postoperative Brain	173
5.1	Brain Tumors	173
5.2	Neurodegenerative, Neuropsychiatric, and Epilepsy Surgery	207
	Further Reading	233
6	Imaging of the Postoperative Skull Base and Cerebellopontine Angle	239
6.1	Anterior Craniofacial Resection	239
6.2	Decompression of Cystic Sellar/Suprasellar Lesions.	250
6.3	Transsphenoidal Resection	252
6.4	Transsphenoidal Resection Complications.	258
6.5	Middle Cranial Fossa Reconstruction.	267
6.6	Middle Cranial Fossa Approach	269
6.7	Translabyrinthine Resection	270
6.8	Retrosigmoid Craniotomy Approach	276
6.9	Auditory Brainstem Stimulator	283
6.10	Stereotactic "Gamma Knife" Radiosurgery	284
	Further Reading	285
7	Imaging of the Postoperative Ear and Temporal Bone	287
7.1	Bone-Anchored Hearing Aid (BAHA) Device.	287
7.2	Auriclectomy	288
7.3	Auricular Reconstruction	290
7.4	Canalplasty and Meatoplasty	291
7.5	Atresioplasty	292
7.6	Myringotomy and Tympanostomy Tubes.	293
7.7	Myringoplasty and Tympanoplasty	295
7.8	Incus Interposition	300
7.9	Partial Ossicular Reconstruction Prosthesis (PORP), Total Ossicular Reconstruction Prosthesis (TORP), and Vibrating Ossicular Prosthesis (VORP).	301
7.10	Stapedectomy, Stapedotomy, and Stapes Prosthesis	304
7.11	Ossicular Prosthesis Complications	307
7.12	Transcanal Atticotomy	311
7.13	Eustachian Tube Occlusion Procedures	312
7.14	Mastoidectomy and Mastoid Obliteration	314
7.15	Mastoidectomy Complications.	316
7.16	Lateral Temporal Bone Resection	324
7.17	Cochlear Implants.	328
7.18	Cochlear Implant Complications	329
7.19	Repair of Perilymphatic Fistula	332
7.20	Endolymphatic Sac Decompression and Shunting.	333

7.21	Labyrinthectomy	333
7.22	Vestibular Nerve Sectioning	334
7.23	Superior Semicircular Canal Dehiscence Repair	335
7.24	Tube Drainage of Cholesterol Cysts	336
	Further Reading	337
8	Imaging of Mandible and Temporomandibular	
	Joint Surgery	341
8.1	Vertical Ramus Osteotomy	341
8.2	Sagittal Split Osteotomy	342
8.3	Genioplasty	343
8.4	Mandibular Angle Augmentation	345
8.5	Mandibular Distraction	346
8.6	Fixation of Mandible Fractures	349
8.7	Mandibulotomy	351
8.8	Excision and Enucleation	351
8.9	Cyst Decompression	353
8.10	Coronoidectomy	354
8.11	Mandibulectomy and Mandibular Reconstruction	355
8.12	Eminectomy and Meniscal Plication	360
8.13	Temporomandibular Joint Discectomy	361
8.14	Temporomandibular Joint Costochondral Graft Reconstruction	362
8.15	Temporomandibular Joint Disc Replacement Implants	363
8.16	Temporomandibular Joint Hemiarthroplasty	364
8.17	Temporomandibular Total Joint Arthroplasty	365
8.18	Temporomandibular Joint Disc Implant and Prosthesis Failure	368
	Further Reading	370
9	Imaging the Postoperative Neck	373
9.1	Reconstruction Flaps	373
9.2	Parotidectomy	377
9.3	Salivary Duct Stenting	382
9.4	Facial Reanimation	382
9.5	Lip Reconstruction	385
9.6	Glossectomy and Floor of Mouth Reconstruction	386
9.7	Tonsillectomy and Adenoidectomy	390
9.8	Neck Dissection	394
9.9	Laryngectomy	400
9.10	Tracheoesophageal Puncture and Voice Prostheses	408
9.11	Montgomery T-Tubes	410
9.12	Salivary Bypass Stent	411
9.13	Laryngeal Stents	411
9.14	Laryngoplasty and Vocal Fold Injection	413
9.15	Arytenoidectomy	419
9.16	Laryngeal Framework Reconstruction	420

9.17	Thyroidectomy	421
9.18	Neck Exploration and Parathyroidectomy	425
9.19	Sistrunk Procedure	427
9.20	Brachytherapy.	429
9.21	Vagal Nerve Stimulator	430
	Further Reading	431
10	Imaging of Cerebrospinal Fluid Shunts, Drains, and Diversion Techniques	435
10.1	Types of Procedures	435
10.2	Complications.	459
	Further Reading	478
11	Imaging of Postoperative Spine	483
11.1	Spine Decompression	484
11.2	Spine Stabilization and Fusion	497
11.3	Dynamic Stabilization and Miscellaneous Devices of the Spine	526
11.4	Failed Back Surgery Syndrome	541
11.5	Percutaneous Spine Treatments	566
	Further Reading	575
12	Imaging of Vascular and Endovascular Surgery	585
12.1	Vascular Surgery.	585
12.2	Endovascular Surgery.	607
	Further Reading	635
	Index.	641