Contents

1. **Advances in Airway Vascular Lesion Assessment and Treatment** 1
Jonathan A Perkins, Andrew F Inglis
- Diagnosis: Clinical 2
- Diagnosis: Histologic 2
- Airway Assessment 4
- Treatment 5

2. **What is New in Tonsillectomy and Adenoidectomy?** 11
Alison Maresh, Rahul K Shah
- Patient Selection 11
- Surgical Techniques Responders 15
- Perioperative Management 18

3. **Sensorineural Hearing Loss in Children** 26
Emily Z Stucken, Anil K Lalwani
- Classification and Etiology 26
- Nonsyndromic Hearing Loss 27
- Detection 36
- Evaluation 38
- Intervention 40

4. **Migranous Vertigo** 44
J Kirk Roberts
- Pathophysiology 44
- Clinical 46
- Treatment 48

5. **Nonsurgical Alternatives for Treatment of Single-Sided Deafness (SSD)** 52
Jaclyn B Spitzer, Dean M Mancuso, Ilana P Cellum
- Indications for Nonsurgical Treatments 53
- Bone Conduction Hearing Aid 54
- Baha™/Ponto™ Using Headband or Softband 54
- Contralateral Routing of Signals (CROS) 57
- Transcranial CROS 59
- TransEar™ 59
- SoundBite™ 60

6. **Aspects of Ossiculoplasty** 66
Markus Pfister, Albrecht Eiber
- Introduction and Historical Aspects 66
- Ossiculoplasty Techniques 66
- Types of Ossiculoplasty 69
- Clinical Studies 71
- Causes of Failure 71
- Acoustic Properties 72
- Surgical Handling Properties 74

7. **Human Papillomavirus in Head and Neck Cancer** 78
Julie A Theurer, Anthony C Nichols
- Human Papillomaviruses and Cancer: Historical Perspective 79

- Mechanism of Carcinogenesis 80
- Epidemiology of HPV Infection and HPV-Positive HNSCC 83
- Clinical and Morphological Features of HPV-Positive HNSCC 86
- Public Health Implications 87
- Treatment of OPSCC in the Age of HPV-Associated Disease 88
- Prognosis and Survival in HPV-Positive HNSCC 90
- HPV-Specific Therapy 94

8. Ultrasound in Head and Neck Surgery **100**
Ilya Likhterov, Lisa A Orloff

- Ultrasound Physics 101
- Ultrasound Interpretation of Head and Neck Pathology 102
- Lymph Node Anatomy 103
- Ultrasound in Thyroid Disorders 105
- Ultrasound in Disorders of the Parathyroid Gland 112
- Ultrasound in Salivary Gland Disorders 115
- Ultrasound in Pediatric Otolaryngology 118
- Ultrasound-Guided Procedures in the Head and Neck 119
- Future Directions 120

9. Chemoradiation for Management of Locally Advanced Head and Neck Cancer **127**
Assuntina G Sacco, Francis P Worden, Avraham Eisbruch, Carol R Bradford

- Rationale for Chemoradiation 128
- Concurrent CRT by Site 128
- Adjuvant Concurrent CRT 138
- Induction Chemotherapy 140
- Altered Fractionation Radiation Therapy 142
- Molecularly Targeted Agents as Radiosensitizers 143

10. Role of PET Scanning in Head and Neck Cancer **154**
Allen S Ho, Luc GT Morris

- Technical Considerations 155
- Cancer-Specific Considerations 157
- PET/CT in Staging 157
- Radiation Treatment Planning 161
- Treatment Response 161
- Surveillance 163
- Cost Effectiveness 165
- Implications for Clinical Practice 166

11. Midface Lifting **173**
Vito C Quatela, David M Lieberman, Marcelo B Antunes

- Midface Anatomy 173
- Treatment 177
- Operative Technique 179
- Complications 183

12. Free Flap Reconstruction in Head and Neck **188**
William Ignace Wei, Jimmy Yu Wai Chan

- Reconstructive Principles 188
- Microvascular Free Flaps 189
- Composite Tissue Allotransplantation 191
- Tissue Engineering 192

13. News in Clinical Olfaction and Gustation: Diagnostic Tools **196**
C Huart, P Rombaux, T Hummel

- Psychophysical Evaluation 196

- Electrophysiological Evaluation 198
- Imaging Evaluation 204
- Future Perspectives 210

14. Transorbital Skull Base Surgery **219**
Randall A Bly, Kris S Moe

- Four Quadrants of the Orbit and Surgical Technique 222
- Computer Modeling to Determine Optimal Approach 231
- Computer-Guided Skull Base Reconstruction 232

15. Nasal Polyposis
Roheen Raithatha, Vijay Anand

- Incidence/Prevalence 238
- Clinical Presentation 238
- Radiology 240
- Pathophysiology 240
- Treatment 243

16. Biofilms in Otorhinolaryngology **254**
Teemu J Kinnari, Saku T Sinkkonen, Antti A Aarnisalo, Jussi Jero

- Why do Bacteria Live in Biofilms? 255
- Diagnostics 256
- Otology 257
- Adenotonsillar Disease 259
- Rhinology 259
- Biomaterial Infections 261
- Future Therapeutic Options for Biofilm Treatment 264

17. Advances in Head and Neck Imaging **271**
M Reza Taheri, Ashkan Monfared

- Diffusion-Weighted Imaging: The Established and Evolving Roles 272
- Dynamic Contrast-Enhanced MRI: Contrast—Evolving Applications 278
- Fast Imaging with Steady-State Free Precession: Anatomy—Better Imaged 279
- New Applications of MRI: Elevated Intracranial Pressure 283

18. Office-Based Laryngeal Surgery **292**
Sunil P Verma, Seth H Dailey

- Equipment 292
- Anesthesia 293
- Patient Selection 295
- Patient Positioning 295
- Summary of Key Points 301

Index *305*