

# Contents

Abbreviations	X
<b>Chapter 1</b> Introduction	<b>1</b>
Acknowledgments	3
<b>Chapter 2</b> Surgical setup and patient preparation	<b>5</b>
2.1 Patient selection	5
2.2 Patient preparation for surgery	6
2.3 Medications	6
2.4 The surgical room	7
2.5 Postsurgical care and suture removal	7
2.6 References	7
<b>Chapter 3</b> Membranes and graft materials	<b>9</b>
3.1 Scientific documentation of horizontal GBR using different membranes	9
3.2 Scientific documentation of vertical GBR using different membranes	11
3.3 Grafting materials used for GBR	12
3.4 References	17
<b>Chapter 4</b> The intraoral harvesting of autogenous bone	<b>21</b>
4.1 Bone harvesting from the mandibular symphysis	21
4.2 Bone harvesting from the mandibular ramus	26
4.3 Reference	28
<b>Chapter 5</b> The surgical anatomy of the floor of the mouth	<b>29</b>
5.1 Musculature of the floor of the mouth and the tongue	30
5.2 Arterial supply	32
5.3 Anatomical variations of floor of the mouth vascularization	36
5.4 Nerves	37
5.5 Salivary glands	37
5.6 Conclusion	37
5.7 References	37

Chapter 6	Principles of vertical and horizontal ridge augmentation in the posterior mandible	39
6.1	Flap design	39
6.2	Preparation of the recipient site	40
6.3	Membrane adaptation	41
6.4	Mobilization of the lingual flap: the modified lingual flap advancement	42
6.5	Buccal flap advancement	45
6.6	Flap closure	46
6.7	Expected healing after posterior mandibular surgery	57
6.8	Treatment of more advanced defects	57
6.9	Conclusion	60
6.10	References	60
Chapter 7	Vertical ridge augmentation	61
7.1	Distraction osteogenesis	61
7.2	Onlay bone grafting	62
7.3	Scientific documentation of vertical GBR with different grafting materials	62
7.4	Conclusion	63
7.5	References	63
Chapter 8	Vertical ridge augmentation in the posterior mandible	65
8.1	Important clinical factors for consideration	65
8.2	Conclusion	89
8.3	References	89
Chapter 9	Anterior mandibular ridge augmentation	91
9.1	The buccal flap	91
9.2	The lingual flap	92
9.3	Preparation of the recipient site	93
9.4	Membrane adaptation and stabilization	94
9.5	Buccal flap advancement	94
9.6	Mobilization of the lingual flap	94
9.7	Flap closure	96
9.8	Conclusions	104
9.9	Reference	104

<b>Chapter 10</b>	<b>Combined posterior maxillary and ridge augmentation for partially edentulous patients</b>	<b>105</b>
10.1	Flap design	105
10.2	Sinus augmentation	106
10.3	References	116
<b>Chapter 11</b>	<b>Horizontal ridge augmentation: the sausage technique</b>	<b>117</b>
11.1	Case series and representative case using polyglycolic acid–trimethylene carbonate membranes	118
11.2	The use of a natural collagen membrane	120
11.3	Case series and representative cases using a natural collagen membrane	123
11.4	Representative cases with long-term follow-up in different regions using the sausage technique	129
11.5	Learning curve versus the well-developed sausage technique 2.0	139
11.6	Conclusion	145
11.7	References	145
<b>Chapter 12</b>	<b>Ridge augmentation in the anterior maxilla</b>	<b>147</b>
12.1	References	149
<b>Chapter 13</b>	<b>Papilla reconstruction in conjunction with vertical augmentation in single tooth defects</b>	<b>151</b>
13.1	Case examples and lessons learned	152
13.2	Conclusions	172
13.3	References	172
13.4	Suggested additional reading	172
<b>Chapter 14</b>	<b>Surgical management of significant anterior maxillary vertical ridge defects: the classification of anterior maxillary vertical defects</b>	<b>175</b>
14.1	Anterior maxillary vertical ridge augmentation (AMVRA) flap design classification	175
14.2	References	202

Chapter 15	Lateralization of the nasopalatine nerve: the palatal flap	203
15.1	The palatal flap	203
15.2	Clinical evaluation	207
15.3	References	209
Chapter 16	Mucogingival surgery after bone augmentation	211
16.1	Representative case	212
16.2	The adapted soft tissue surgery	217
16.3	Representative case	219
16.4	Long-term results	230
16.5	Conclusion	239
16.6	References	239
Chapter 17	New perspectives in mucogingival surgery after ridge augmentation	241
17.1	Representative cases and clinical data	242
17.2	References	264
Chapter 18	New perspectives in crestal bone preservation after ridge augmentation	265
18.1	Case series: long-term results	266
18.2	Representative case and lessons learned	266
18.3	Conclusion	276
18.4	Reference	276
Chapter 19	The development and maintenance of a positive gingival architecture using single implants in multiple missing teeth	277
19.1	References	292
Chapter 20	Reconstruction of the edentulous resorbed maxilla	293
20.1	Conclusions	333
20.2	References	334

