

Contents

Foreword	xiii
Preface	xiv
Contributors	xv
Section I Principles	
1 Three-dimensional Imaging for Emerging Technologies in Body Contouring	3
<i>Isabel Robinson and Pierre Saadeh</i>	
1.1 Introduction	4
1.2 History of 3D Imaging in Plastic Surgery	4
1.3 Preoperative Benefit of 3D Imaging	5
1.4 Intraoperative Benefit of 3D Imaging	6
1.5 Postoperative Benefit of 3D Imaging	6
1.6 Limitations	7
1.7 Conclusion	7
2 Clinically Applicable Concepts of Fat Metabolism	9
<i>Rachel L. Goldstein, William G. Austen Jr., and Erez Dayan</i>	
2.1 Introduction	9
2.2 Anatomy of Adipose Tissue	9
2.2.1 Gross Structure	9
2.2.2 Cellular Components and Structure	11
2.3 Physiology of Adipose Tissue	12
2.3.1 Functions of the Adipose Organ	12
2.3.2 Adipose Tissue Development, Metabolism, and, Turnover	12
2.4 Biological Implications of Liposuction	14
2.4.1 Biological Effects on Cosmetic Outcome	14
2.4.2 Metabolic Effects of Liposuction	15
2.5 Biological Implications of Fat Grafting	16
2.6 Conclusion	16
Section II Noninvasive Body Contouring	
3 Noninvasive Laser Body Contouring	21
<i>John W. Decorato</i>	
3.1 Introduction	21
3.2 Hyperthermic Treatment	21
3.3 Laser Tissue Interaction	21
3.4 Tissue Response To Laser Treatment	22
3.5 Patient Selection	23
3.6 Technique	23
3.7 Results of Treatment	25
3.8 Limitations Of Treatment	28
3.9 Conclusions	29
4 Ultrasound in Noninvasive Body Shaping	30
<i>Jennifer Croix and Anne Chapas</i>	
4.1 Introduction	30
4.2 Patient Selection	34
4.3 Technique	35
4.3.1 Baseline Measurement and Assessments	35
4.3.2 HIFU Procedure	35
4.3.3 Low Frequency (Nonthermal) Focused Ultrasound Procedure	36

Contents

4.4	Clinical Applications	37	4.6	Technology Pros and Cons	37
4.5	Combination Treatments	37			
5	Three-dimensional Cryolipolysis Body Contouring				40
	<i>Villy Rodopoulou</i>				
5.1	Introduction	40	5.5	Evaluation-Consultation	43
5.2	Patient Selection	42	5.6	Treatment	43
5.3	Exclusion Criteria	42	5.7	Aftercare	44
5.4	Technique	42	5.8	Clinical Applications	45
6	Noninvasive Radiofrequency Fat Destruction for Body Contouring				52
	<i>Alix O'Brien and Sherrell J. Aston</i>				
7	The Role of Stem Cells in Body Contouring				61
	<i>Aris Sterodimas</i>				
7.1	Introduction	61	7.4.1	Patient 1	64
7.2	Patient Selection	62	7.4.2	Patient 2	65
7.3	Technique	62	7.4.3	Patient 3	66
7.4	Clinical Applications	64	7.4.4	Patient 4	67
			7.4.5	Patient 5	68
			7.5	Discussion	69
8	Ethnic Considerations in Liposuction				71
	<i>William Lao</i>				
8.1	Introduction	71	8.5	Attitude toward General Anesthesia	75
8.2	Ideal Body Shape	72	8.6	Scarring	76
8.3	BMI Differences	74	8.7	Conclusion	77
8.4	Skin Quality	75			
Section III Liposuction Technology					
9	Laser-Assisted Liposuction Under Local Anesthesia: Office-Based Surgery				81
	<i>Christopher T. Chia</i>				
9.1	Introduction	81	9.4.1	Tumescent Solution	83
9.2	Preoperative Evaluation	82	9.4.2	Intraoperative Considerations	87
9.3	Preoperative Medications	82	9.5	Postoperative Considerations	89
9.4	Local Anesthesia Method	82	9.6	Complications	89
10	Radiofrequency-Assisted Liposuction for Body Contouring				91
	<i>Spero J. Theodorou, Christopher T. Chia, and Erez Dayan</i>				
10.1	Radiofrequency Technology	91	10.3	RF Device	92
10.2	RFAL: Mechanism of Action	91	10.4	Safety Parameters	94

Contents

15	Injection Lipolysis–Neck	140
	<i>Sachin M. Shridharani</i>	
15.1	Introduction	140
15.2	Deoxycholic Acid (DCA)	141
15.3	Patient Evaluation	142
15.4	Preoperative Planning and Preparation	143
15.5	Surgical Technique	143
15.5.1	Positioning and Markings	143
15.5.2	Anesthesia	145
15.5.3	Technique	145
15.6	Results and Outcomes	146
15.6.1	Case 1	146
15.6.2	Case 2	146
15.7	Problems and Complications	147
16	Neck: Radiofrequency Liposuction	150
	<i>Evangelos Keramidas</i>	
16.1	Introduction	150
16.2	Patient Selection	150
16.3	Preoperative Planning and Preparation	151
16.4	Surgical Technique	151
16.4.1	Marking the Neck	151
16.5	Incisions	151
16.6	Infiltration	151
16.7	Devices	151
16.8	Gel	153
16.9	Technique	153
16.10	Depth of the Treatment	153
16.11	Surgical Tips	153
16.12	Statistics	154
16.13	Postoperative Care	154
16.14	Results	155
16.15	Complications	156
16.16	Case Studies	156
16.16.1	Case 1	156
16.16.2	Case 2	157
16.16.3	Case 3	157
17	Neck Liposuction: The Classic Technique	160
	<i>Steven M. Levine</i>	
17.1	Patient Evaluation	160
17.2	Preoperative Planning and Preparation	160
17.3	Surgical Technique	161
17.3.1	Skin Preparation	161
17.3.2	Anesthesia	161
17.3.3	Marking	161
17.3.4	Patient Positioning	161
17.3.5	Technique	161
17.3.6	Ancillary Procedures	163
17.3.7	Postoperative Care	163
17.3.8	Healing	163
17.4	Results and Outcomes	164
17.5	Problems and Complications	164
18	Radiofrequency-Assisted Liposuction for Arm Contouring	165
	<i>Spero J. Theodorou, Christopher T. Chia, and Stelios C. Wilson</i>	
18.1	Anatomical RFAL Arm Landmarks	165
18.2	No Man's Land	166
18.3	Zone 1 and Zone 2	166
18.4	Deltoid Fat Pad	166
18.4.1	Deltoid Fat Pad Marking	166
18.5	Triceps Fat Pad Marking and Treatment Parameters	168
18.6	RFAL Arm Candidate Selection	170
18.7	Radiofrequency Application	172
18.8	Conclusion	173

19	FaceTite: Procedure Technique	174
	<i>P. Paolo Rovatti</i>	
19.1	Patient Cases	178
20	Male Gynecomastia Treatment	181
	<i>Alfredo Hoyos and David E. Guarin</i>	
20.1	The Beautiful Normal: Male Pectoral Anatomy and Beauty Standards	181
20.2	Analysis of the Male Chest Deformities: Skin versus Gland versus Fat	182
20.3	Algorithm for the Surgical Options in Male Gynecomastia; Male Specific ..	183
20.4	The Role of Fat Grafting to Enhance the Muscular Appearance and Reduce the Scar in Surgical Options	183
20.5	VASER Gynecomastia: VASER Mixed Approach to Induce Skin Retraction and Reduce Bleeding	183
20.6	Open Access for Gynecomastic Tissue: Inverted Omega Incision	183
20.7	Complications, Prevention, and Treatment	184
21	High Definition Body Contouring of the Abdomen	185
	<i>Alfredo Hoyos and David E. Guarin</i>	
21.1	Female versus Male Anatomy: Landmarks, Planes, and Superficial Anatomy	185
21.2	Steady versus Fluctuating Beauty Standards	186
21.3	Biotypes and the Influence Results ..	186
21.3.1	Ectomorphs.....	186
21.3.2	Endomorphs.....	186
21.3.3	Mesomorphs.....	187
21.4	Male High Definition in the Abdominal Area: Procedure, Variations According to Bio Types	187
21.4.1	The Markings.....	187
21.5	The Negative Spaces	187
21.5.1	Incisions.....	188
21.5.2	Infiltration.....	188
21.5.3	Emulsification.....	188
21.5.4	Extraction.....	188
21.6	The Rectus Abdominis	189
21.7	The Intermediate Layer Liposuction	189
21.8	Adjunctive Fat Grafting in the Torso: Where and When To Use It	189
21.9	Complications, Prevention, and Treatment	190
22	Flanks and Hips	191
	<i>Spero J. Theodorou</i>	
22.1	Introduction	191
22.2	Anatomy	191
22.3	Markings	192
22.4	Positioning	192
22.5	Treatment	193
22.6	Postoperative Care	196
22.7	Complications	196
23	Gluteal Augmentation with Implants	197
	<i>Douglas Senderoff</i>	
23.1	Patient Evaluation	197
23.2	Preoperative Planning and Preparation	200
23.3	Surgical Technique	200
23.4	Complications	204

Contents

23.5 Case Examples	206	23.5.2 Case 2	206
23.5.1 Case 1	206	23.5.3 Case 3	206
24 Technology-Based Contouring of the Thighs	210		
<i>W. Jason Martin</i>			
24.1 Introduction	210	24.4 Surgical Technique	214
24.2 Patient Evaluation	211	24.5 Results and Outcomes	218
24.3 Preoperative Planning and Preparation	212	24.5.1 Problems and Complications	218
25 Calf, Ankle, and Knee Contouring	220		
<i>Christopher T. Chia, Stelios C. Wilson, and Gerald H. Pitman</i>			
25.1 Introduction	220	25.4 Procedure	221
25.2 Preoperative Evaluation	220	25.5 Postoperative Considerations	223
25.3 Markings	221	25.6 Pearls and Pitfalls	223
Index			225