

Table of contents

List of Contributors x

Acknowledgments xiii

Section 1 Introduction 1

CHAPTER 1 TOOLS OF THE TRADE – INTERVENTIONAL RADIOLOGY 3
Fei Sun

CHAPTER 2 TOOLS OF THE TRADE – INTERVENTIONAL ENDOSCOPY 15
Allyson Berent

CHAPTER 3 ONCOLOGY FOR THE INTERVENTIONALIST 29
Christine Mullin and Craig A. Clifford

Section 2 Respiratory System 41

CHAPTER 4 EPISTAXIS EMBOLIZATION 43
Chick Weisse

CHAPTER 5 NASAL/SINUS TUMORS 51
William T.N. Culp

CHAPTER 6 INTERVENTIONAL TREATMENT OF NASOPHARYNGEAL Stenosis 63
Allyson Berent

CHAPTER 7 INTRALUMINAL TRACHEAL STENTING 73
Chick Weisse

CHAPTER 8 BRONCHIAL COLLAPSE AND STENTING 83
George A. Kramer

Chapter 9 PLEURAL SPACE DISEASE – THORACIC DRAINAGE AND PORT
PLACEMENT 91
William T.N. Culp

CHAPTER 10 INTERVENTIONAL TREATMENT OF LARGE AIRWAY
OBSTRUCTIONS: ABLATIONS, BALLOON DILATION, AND FOREIGN BODY
RETRIEVAL 100
Allyson Berent

Section 3 Gastrointestinal System 109

Chapter 11 Oral Tumors 111
William T.N. Culp

CHAPTER 12 ESOPHAGEAL FOREIGN BODY RETRIEVAL 118

Douglas A. Palma

CHAPTER 13 ESOPHAGEAL OBSTRUCTION: STRICTURES/TUMORS – BALLOON, BOUGIE, INJECTIONS, STENT 130

Douglas A. Palma and Allyson Berent

Chapter 14 Gastrointestinal System – Gastric Foreign Body Retrieval 145

Douglas A. Palma

Chapter 15 Gastrointestinal Polypectomy 155

Douglas A. Palma and Allyson Berent

Chapter 16 PEG Tube Placement 163

Douglas A. Palma

Chapter 17 Stenting for Gastrointestinal Obstructions 179

Allyson Berent

Chapter 18 Image-Guided Nutritional Support Techniques 187

Matthew W. Beal

Section 4 Hepatobiliary System 199

Chapter 19 Hepatobiliary Imaging 201

Allison Zwingenberger

Chapter 20 Vascular Anatomy 209

Fei Sun and Rafael Latorre

Chapter 21 Portosystemic Shunt Embolization : IHPSS/EHPSS 215

Chick Weisse

Chapter 22 Hepatic Arteriovenous Malformations (AVMs) and Fistulas 227

Chick Weisse

Chapter 23 Liver Tumors/Metastases (TAE/cTACE/DEB-TACE) 238

Chick Weisse

Chapter 24 Endoscopic Retrograde Cholangiopancreatography (ERCP) and Biliary Stent Placement 247

Allyson Berent

Chapter 25 Cholecystostomy 256

Sean Murphy

Section 5 Urogenital System 261

Chapter 26 Imaging of the Urinary Tract 263

Amy M. Habing and Julie K. Byron

- Chapter 27 Interventional Management of Complicated Nephrolithiasis 289
Allyson Berent and Larry G. Adams
- Chapter 28 Interventional Treatment of Idiopathic Renal Hematuria 301
Allyson Berent
- Chapter 29 Interventional Management of Canine and Feline Benign Ureteral Obstructions
309
Allyson Berent
- Chapter 30 Interventional Management of Obstructive Pyonephrosis 336
Allyson Berent
- Chapter 31 Interventional Management of Canine Malignant Ureteral Obstructions 343
Allyson Berent
- Chapter 32 Cystoscopic -Guided Laser Ablation of Ectopic Ureters 351
Allyson Berent
- Chapter 33 Minimally Invasive Treatment of Bladder and Urethral Stones in Dogs and Cats
360
Allyson Berent and Larry G. Adams
- Chapter 34 Urethral Stenting 373
Chick Weisse
- Chapter 35 Endoscopic Polypectomy and Laser Ablation for Benign Urinary Bladder Lesions
383
Allyson Berent
- Chapter 36 Intra-arterial Chemotherapy Infusion 389
Chick Weisse
- Chapter 37 Ultrasound -Guided Endoscopic Laser Ablation for Transitional Cell Carcinoma
in Dogs 398
Dean J. Cerf and Eric C. Lindquist
- Chapter 38 Injectable Bulking Agents for Treatment of Urinary Incontinence 410
Julie K. Byron
- Chapter 39 Percutaneous Perineal Approach to the Canine Urethra 415
Chick Weisse
- Chapter 40 Percutaneous Antegrade Urethral Catheterization 419
Elaine Holmes
- Chapter 41 Percutaneous Cystostomy Tube 423
Elaine Holmes

Chapter 42 Endoscopic Laser Ablation of Vestibulovaginal Remnants (ELA-VR) 427
Stacy Kathleen Burdick and Allyson Berent

Section 6 Vascular/Lymphatic Systems 433

Chapter 43 Lymphangiography 435
Ameet Singh

Chapter 44 Vascular Access 439
Chick Weisse

Chapter 45 Foreign Body Retrieval 449
William T.N. Culp

Chapter 46 Hemorrhage Embolization 456
Chick Weisse

Chapter 47 THROMBECTOMY AND THROMBOLYSIS: THE INTERVENTIONAL RADIOLOGY APPROACH 464
Marilyn E. Dunn and Chick Weisse

Chapter 48 Peripheral Arteriovenous Fistulas and Vascular Malformations 479
Chick Weisse

Chapter 49 Central Venous Vascular Obstruction 488
Michael David Schlicksup and Matthew W. Beal

Chapter 50 Cisterna Chyli and Thoracic Duct Glue Embolization 497
Ameet Singh

Section 7 Cardiac System 503

Chapter 51 Radiographic Cardiac Anatomy 505
Brian A. Scansen

Chapter 52 Pericardial Disease 513
Steven G. Cole

Chapter 53 Cardiac Pacing 518
Amara H. Estrada

Chapter 54 Arrhythmia Ablation 531
Roberto A. Santilli and Manuela Perego

Chapter 55 Heartworm Extraction 541
Ashley B. Saunders

Chapter 56 Transcatheter Mitral Valve Therapies 547
E. Christopher Orton

Chapter 57 Cardiac Tumor Palliation 556
Chick Weisse and Brian A. Scansen

Chapter 58 Patent Ductus Arteriosus 564
Christopher D. Stauthammer

Chapter 59 PULMONARY VALVE STENOSIS 575
Brian A. Scansen

Chapter 60 Aortic Valve Stenosis 588
Mandi E. Kleman

Chapter 61 ATRIOVENTRICULAR VALVE STENOSIS 595
Aaron C. Wey

Chapter 62 Cor Triatriatum 604
Bruce W. Keene and Sandra P. Tou

Chapter 63 Septal Defects 610
Sonya G. Gordon

Section 8 Musculoskeletal/Neurological Systems 621

Chapter 64 Tumor Ablations – Soft Tissue and Skeletal 623
William T.N. Culp

Chapter 65 Transarterial Embolization and Chemoembolization 629
Sarah Boston

Chapter 66 Analgesic Nerve, Neuraxial, Articular and Soft Tissue Interventions 635
Andrea L. Looney

Index 649