

Gastrointestinal Pathology and Liver Metastasis

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A volume in the series

SURGICAL PATHOLOGY: A CASE-BASED APPROACH TO DIAGNOSIS

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Elsevier
1600 John F. Kennedy Blvd.
Ste 1800
Philadelphia, PA 19103-2899

GASTROINTESTINAL PATHOLOGY AND LIVER METASTASIS ISBN: 978-0-323-82688-4

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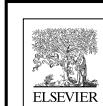
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Printed in India

Last digit is the print number: 9 8 7 6 5 4 3 2 1



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Contents

Contributors, vi

Preface, x

Part 1: Esophagus, 1

Inflammatory Disorders, 2

- 1.1 Eosinophilic Esophagitis Versus Reflux Esophagitis, 2
Azfar Neyaz and Aatur Dilip Singhi
- 1.2 Lymphocytic Esophagitis Versus *Candida* Esophagitis Versus Lichen Planus Esophagitis, 7
Azfar Neyaz and Aatur Dilip Singhi
- 1.3 *Candida* Esophagitis Versus Other Neutrophil-Predominant Esophagitis, 12
Azfar Neyaz and Aatur Dilip Singhi
- 1.4 Viral Esophagitis Versus Pill and Corrosive Esophagitis, 15
Azfar Neyaz and Aatur Dilip Singhi
- 1.5 Epidermoid Metaplasia Versus Glycogenic Acanthosis, 19
Azfar Neyaz and Aatur Dilip Singhi
- 1.6 Melanosis or Melanocytosis ("Brown" Esophagus) Versus Acute Necrosis ("Black" Esophagus), 22
Azfar Neyaz and Aatur Dilip Singhi

Glandular Dysplasia and Carcinoma, 25

- 1.7 Columnar-Lined Esophagus Versus Barrett's Esophagus, 25
Phoenix Bell and Amitabh Srivastava
- 1.8 Multilayered Epithelium Versus Barrett's Esophagus, 29
Phoenix Bell and Amitabh Srivastava
- 1.9 Ancillary Stains for the Diagnosis of Barrett's Esophagus, 31
Phoenix Bell and Amitabh Srivastava
- 1.10 Barrett's Esophagus Versus Carditis With Intestinal Metaplasia, 33
Phoenix Bell and Amitabh Srivastava
- 1.11 Reactive Changes Versus Dysplasia (Including "Crypt Dysplasia") in Barrett's Esophagus, 36
Phoenix Bell and Amitabh Srivastava
- 1.12 Low-Grade Versus High-Grade Conventional Dysplasia, 39
Phoenix Bell and Amitabh Srivastava
- 1.13 Conventional Versus Foveolar Dysplasia, 41
Phoenix Bell and Amitabh Srivastava

- 1.14 p53 Immunohistochemistry for Diagnosis of Dysplasia in Barrett's Esophagus, 43

Phoenix Bell and Amitabh Srivastava

- 1.15 High-Grade Dysplasia Versus Intramucosal Adenocarcinoma, 46

Phoenix Bell and Amitabh Srivastava

- 1.16 Early Adenocarcinoma Reporting in Endoscopic Mucosal Resection and Endoscopic Submucosal Dissection Specimens, 48

Phoenix Bell and Amitabh Srivastava

- 1.17 Esophageal Adenocarcinoma Variants, 51

Phoenix Bell and Amitabh Srivastava

Squamous Dysplasia and Carcinoma, 54

- 1.18 Grading and Management of Squamous Dysplasia, 54

Phoenix Bell and Amitabh Srivastava

- 1.19 Typical and Variant Squamous Cell Carcinoma, 57

Phoenix Bell and Amitabh Srivastava

Uncommon and Rare Esophageal Tumors and Therapy-Related Changes, 60

- 1.20 Giant Fibrovascular Polyp Versus Atypical Lipomatous Tumor, 60
Diana Agostini-Vulaj and Raul S. Gonzalez
- 1.21 Leiomyoma Versus Granular Cell Tumor, 63
Diana Agostini-Vulaj and Raul S. Gonzalez
- 1.22 Poorly Differentiated and Undifferentiated Esophageal Carcinomas, 66
Diana Agostini-Vulaj and Raul S. Gonzalez
- 1.23 Diagnostic Challenges in Post-neoadjuvant Esophageal Cancer Resection Specimens, 70
Diana Agostini-Vulaj and Raul S. Gonzalez
- 1.24 Esophageal Adenocarcinoma Versus Salivary Gland-Type Tumors, 74
Diana Agostini-Vulaj and Raul S. Gonzalez
- 1.25 Primary Versus Secondary Esophageal Carcinomas, 77
Diana Agostini-Vulaj and Raul S. Gonzalez

Part 2: Stomach, 81

Benign Conditions, 82

- 2.1 Normal Stomach Versus Chronic Gastritis, 82

Won-Tak Choi and Gregory Y. Lauwers

- 2.2 Chronic Gastritis Versus Reactive Gastropathy, 86

Won-Tak Choi and Gregory Y. Lauwers

2.3 *Helicobacter Pylori* Gastritis: To Stain or Not to Stain, 89
Won-Tak Choi and Gregory Y. Lauwers

2.4 Autoimmune Gastritis Versus *Helicobacter* Gastritis, 93
Won-Tak Choi and Gregory Y. Lauwers

2.5 Iron Pill Gastropathy Versus Other Gastric Siderosis, 98
Won-Tak Choi and Gregory Y. Lauwers

2.6 Doxycycline Injury Versus Nonspecific Erosion, 100
Won-Tak Choi and Gregory Y. Lauwers

2.7 Lanthanum Injury Versus Other Histiocytic Infiltration, 102
Won-Tak Choi and Gregory Y. Lauwers

2.8 Lymphocytic Versus Collagenous Gastritis, 105
Won-Tak Choi and Gregory Y. Lauwers

2.9 Gastric Biopsy With Increase in Eosinophils, 108
Won-Tak Choi and Gregory Y. Lauwers

2.10 Acute Gastritis With Ulcer Versus Cytomegalovirus Gastritis, 110
Won-Tak Choi and Gregory Y. Lauwers

2.11 Acute Gastritis With Ulcer Versus Adenovirus Gastritis, 113
Won-Tak Choi and Gregory Y. Lauwers

2.12 Phlegmonous Gastritis, 115
Won-Tak Choi and Gregory Y. Lauwers

2.13 Chronic Gastritis With Intestinal Metaplasia: To Type or Not to Type, 117
Won-Tak Choi and Gregory Y. Lauwers

2.14 Chronic Gastritis With Reactive Changes Versus Intestinal-Type Dysplasia, 121
Won-Tak Choi and Gregory Y. Lauwers

2.15 Chronic Gastritis With Reactive Changes Versus Foveolar Dysplasia, 125
Won-Tak Choi and Gregory Y. Lauwers

2.16 High-Grade Dysplasia Versus Intramucosal Adenocarcinoma, 128
Won-Tak Choi and Gregory Y. Lauwers

Polyps, 130

2.17 Hyperplastic Polyp Versus Fundic Gland Polyp, 130
Won-Tak Choi and Gregory Y. Lauwers

2.18 Hyperplastic Polyp With Dysplasia Versus Intestinal-Type Adenoma, 133
Won-Tak Choi and Gregory Y. Lauwers

2.19 Pyloric Gland Adenoma Versus Foveolar-Type Adenoma, 135
Won-Tak Choi and Gregory Y. Lauwers

2.20 Oxytic Gland Adenoma Versus Other Adenomas, 139
Won-Tak Choi and Gregory Y. Lauwers

2.21 Hyperplastic Polyp Versus Peutz-Jeghers Polyp, 142
Won-Tak Choi and Gregory Y. Lauwers

2.22 Multiple Fundic Polyps Versus Gastric Adenocarcinoma and Proximal Polyposis of the Stomach, 144
Won-Tak Choi and Gregory Y. Lauwers

Malignant Epithelial Tumors, 147

2.23 Gastric Adenocarcinoma: Intestinal Versus Diffuse Type, 147
Won-Tak Choi and Gregory Y. Lauwers

2.24 Lymphocyte-Rich/Epstein-Barr Virus-Positive Versus Mismatch Repair Deficient Adenocarcinoma, 151
Won-Tak Choi and Gregory Y. Lauwers

2.25 Hepatoid Carcinoma Versus Poorly-Differentiated Adenocarcinoma, 155
Won-Tak Choi and Gregory Y. Lauwers

2.26 Enteroblastic Adenocarcinoma Versus Conventional Adenocarcinoma, 158
Won-Tak Choi and Gregory Y. Lauwers

2.27 Signet Ring Cell Carcinoma Versus Pseudo Signet Ring Cells, 161
Won-Tak Choi and Gregory Y. Lauwers

2.28 Signet Ring Cell Carcinoma: Sporadic Versus Familial, 164
Won-Tak Choi and Gregory Y. Lauwers

2.29 Signet Ring Cell Carcinoma: Primary Versus Metastatic, 168
Won-Tak Choi and Gregory Y. Lauwers

2.30 Sarcomatoid Carcinoma Versus Sarcoma, 171
Won-Tak Choi and Gregory Y. Lauwers

2.31 Gastroblastoma Versus Adenocarcinoma, 173
Won-Tak Choi and Gregory Y. Lauwers

2.32 Gastric Adenocarcinoma With HER2 Staining, 175
Won-Tak Choi and Gregory Y. Lauwers

2.33 Gastric Adenocarcinoma With Programmed Cell Death Ligand 1 Staining, 178
Won-Tak Choi and Gregory Y. Lauwers

2.34 Well-Differentiated Neuroendocrine Tumor in Autoimmune Gastritis (Type 1) Versus Neuroendocrine Hyperplasia, 181
Won-Tak Choi and Gregory Y. Lauwers

2.35 Well-Differentiated Neuroendocrine Tumor: Sporadic (Type 3) Versus Other Types (Types 1 and 2) and Neuroendocrine Carcinoma, 184
Won-Tak Choi and Gregory Y. Lauwers

Part 3: Small Intestine, 189

Benign Conditions, 190

3.1 Gastric Heterotopia Versus Neoplasm, 190
Dorukhan Bahceci and Grace E. Kim

3.2 Pediatric Small Intestinal Biopsies in Intractable Diarrhea, 193
Soo-Jin Cho

3.3 Small Bowel Disorders: Celiac Disease and Mimics, 197
Ilke Nalbantoglu and Dhanpat Jain

3.4 Small Bowel Infection: Protozoal, Microsporidial, Viral, 208
Gillian Leigh Hale

3.5 **Macrophage Infiltrates: Infectious Versus Non-Infectious Etiologies**, 214
Gillian Leigh Hale

3.6 **Heterotopic Pancreas Versus Neoplasm**, 220
Dorukhan Bahceci and Grace E. Kim

3.7 **Active Ileitis With Crystals Versus Crohn's Disease**, 223
Mojgan Hosseini

Polyps, 226

3.8 **Adenoma With High-Grade Dysplasia Versus Invasive Adenocarcinoma**, 226
Changqing Ma and Reetesh K. Pai

3.9 **Pyloric Gland Adenoma Versus Brunner Gland Hamartoma**, 229
Won-Tak Choi, Gregory Y. Lauwers, and Ryan M. Gill

Tumors, 233

3.10 **Dystrophic Fat Versus Adenocarcinoma**, 233
Stephen M. Lagana and Ryan M. Gill

3.11 **Well-Differentiated Neuroendocrine Tumor Versus Neuroendocrine Carcinoma**, 237
Nancy M. Joseph and Ryan M. Gill

3.12 **Multilocular Peritoneal Inclusion Cyst Versus Malignant Mesothelioma**, 243
Changqing Ma and Reetesh K. Pai

3.13 **Gangliocytic Paraganglioma Versus Well-Differentiated Neuroendocrine Tumor of the Small Intestine**, 247
Changqing Ma and Reetesh K. Pai

3.14 **Ampullary Adenocarcinoma (pT2 Vs pT3)**, 252
Dorukhan Bahceci and Grace E. Kim

3.15 **Small Intestinal Adenocarcinoma Versus Metastatic Adenocarcinoma**, 257
Changqing Ma and Reetesh K. Pai

Part 4: Appendix, 263

Benign Conditions, 264

4.1 **Acute Appendicitis With Diverticulitis Versus Low-Grade Appendiceal Mucinous Neoplasm**, 264
Dana Balitzer and Sanjay Kakar

4.2 **Sessile Serrated Adenoma Versus Mucosal Hyperplasia**, 266
Dana Balitzer and Sanjay Kakar

4.3 **Benign Subserosal Glands (Endosalpingiosis) Versus Adenocarcinoma**, 269
Dana Balitzer and Sanjay Kakar

Malignant Tumors, 272

4.4 **Low-Grade Appendiceal Mucinous Neoplasm Versus Appendiceal Adenoma**, 272
Dana Balitzer and Sanjay Kakar

4.5 **Low-Grade Appendiceal Mucinous Neoplasm Versus Distended Appendix With Mucin**, 274
Dana Balitzer and Sanjay Kakar

4.6 **Low-Grade Appendiceal Mucinous Neoplasm With Serosal Acellular Mucin and Other Risk Factors in Low-Grade Appendiceal Mucinous Neoplasm**, 278
Dana Balitzer and Sanjay Kakar

4.7 **Low-Grade Appendiceal Mucinous Neoplasm Versus High-Grade Appendiceal Mucinous Neoplasm**, 282
Changqing Ma and Reetesh K. Pai

4.8 **Mucinous Carcinoma Peritonei (Pseudomyxoma Peritonei), Low Grade (Grade 1) Versus High Grade (Grade 2)**, 286
Changqing Ma and Reetesh K. Pai

4.9 **Mucinous Carcinoma Peritonei (Pseudomyxoma Peritonei), Grade 2 Versus Grade 3**, 292
Changqing Ma and Reetesh K. Pai

4.10 **Goblet Cell Adenocarcinoma Versus Neuroendocrine Neoplasms and Conventional Adenocarcinoma**, 295
Dana Balitzer and Sanjay Kakar

4.11 **Appendiceal Neuroendocrine Tumor: Low- Versus High-Risk Features**, 300
Dana Balitzer and Sanjay Kakar

4.12 **Tubular Neuroendocrine Tumor Versus Adenocarcinoma**, 304
Dana Balitzer and Sanjay Kakar

Part 5: Colon, 307

Inflammatory Disorders, 308

5.1 **Infectious Colitis Versus Inflammatory Bowel Disease**, 308
Patrick Henn and Lindsey Westbrook

5.2 **Ischemic Versus Pseudomembranous Colitis**, 312
Patrick Henn and Lindsey Westbrook

5.3 **Graft-Versus-Host Disease Versus Bowel Prep Effect**, 316
Patrick Henn and Lindsey Westbrook

5.4 **Eosinophilic Colitis Versus Infiltrative Disorders With Prominent Eosinophils**, 318
Patrick Henn and Lindsey Westbrook

5.5 **Enterocolic Lymphocytic Phlebitis Versus Inflammatory Bowel Disease**, 322
Cameron Beech and Dhanpat Jain

5.6 **Lymphocytic Versus Collagenous Colitis**, 326
Patrick Henn and Lindsey Westbrook

5.7 **Diverticular Disease–Associated Colitis Versus Inflammatory Bowel Disease**, 330
Patrick Henn and Lindsey Westbrook

5.8 **Diversion Colitis Versus Inflammatory Bowel Disease**, 333
Patrick Henn and Lindsey Westbrook

5.9 **Isolated Asymptomatic Chronic Colitis and Ileitis Versus Inflammatory Bowel Disease**, 336
Patrick Henn and Lindsey Westbrook

5.10 **Drug-Induced Colitis Versus Inflammatory Bowel Disease**, 339
Patrick Henn and Lindsey Westbrook

6.3 Low-Grade Versus High-Grade Squamous Intraepithelial Lesion, 467
Sarah E. Umetsu

6.4 High-Grade Squamous Intraepithelial Lesion Versus Superficially Invasive Squamous Cell Carcinoma, 471
Sarah E. Umetsu

6.5 Squamous Cell Carcinoma Versus Basal Cell Carcinoma, 473
Sarah E. Umetsu

6.6 Squamous Cell Carcinoma Versus Neuroendocrine Carcinoma, 477
Sarah E. Umetsu

6.7 Anal Gland Adenocarcinoma Versus Rectal Adenocarcinoma, 479
Sarah E. Umetsu

6.8 Paget Disease Versus High-Grade Squamous Intraepithelial Lesion, 482
Sarah E. Umetsu

6.9 Anal Melanoma, 485
Sarah E. Umetsu

Part 7: Hematopoietic Neoplasms and Mimics, 489

7.1 Gastric Extranodal Marginal Zone Lymphoma Versus *Helicobacter pylori* Gastritis With Lymphoid Hyperplasia, 490
Alexander Thomas Kikuchi and Ryan M. Gill

7.2 Colonic Polypoid Extranodal Marginal Zone Lymphoma Versus Reactive Lymphoid Hyperplasia, 495
Alexander Thomas Kikuchi and Ryan M. Gill

7.3 Mantle Cell Lymphoma, 499
Kwun Wah Wen and Robert Shigeo Ohgami

7.4 Duodenal Follicular Lymphoma Versus Reactive Follicles, 502
Alexander Thomas Kikuchi and Ryan M. Gill

7.5 Colonic Polypoid Follicular Lymphoma Versus Reactive Lymphoid Infiltrates, 505
Alexander Thomas Kikuchi and Ryan M. Gill

7.6 Diffuse Large B-Cell Lymphoma Versus Other Large B-Cell Lymphomas, 508
Rifat Mannan, Kwun Wah Wen, and Robert Shigeo Ohgami

7.7 High-Grade B-Cell Lymphoma Versus Other High-Grade Neoplasms, 511
Kunwar Singh, Kwun Wah Wen, and Robert Shigeo Ohgami

7.8 Enteropathy-Associated T-Cell Lymphoma Versus Other Lymphoma, 514
Kwun Wah Wen, Joshua Robert Menke, and Robert Shigeo Ohgami

7.9 Monomorphic Epitheliotropic Intestinal T-Cell Lymphoma Versus Other Lymphoma, 517
Naoki Akanuma and Ryan M. Gill

7.10 Indolent Clonal T-Cell Lymphoproliferative Disorder of the Gastrointestinal Tract Versus Lymphoma, 522
Kwun Wah Wen, Robert Shigeo Ohgami, and Joshua Robert Menke

7.11 Systemic T-Cell Lymphoma Involvement of the Gastrointestinal Tract Versus Primary Gastrointestinal Lymphoma, 525
Kwun Wah Wen, Arzu Sağlam Ayhan, and Robert Shigeo Ohgami

7.12 Reactive Marginal Zone Hyperplasia Versus Extranodal Marginal Zone Lymphoma, 529
Kwun Wah Wen and Robert Shigeo Ohgami

7.13 Natural Killer Cell Enteropathy Versus Extranodal Natural Killer/T-Cell Lymphoma, 532
Alexander Thomas Kikuchi and Ryan M. Gill

7.14 Myeloid Sarcoma Versus Other Hematopoietic or Small Round Blue Cell Tumors, 536
Naoki Akanuma and Ryan M. Gill

7.15 Systemic Mastocytosis Versus Benign Mast Cells, 541
Kwun Wah Wen and Robert Shigeo Ohgami

7.16 Classic Hodgkin Lymphoma Versus Mimics, 544
Kwun Wah Wen and Robert Shigeo Ohgami

7.17 Langerhans Cell Histiocytosis Versus Langerhans Cell Sarcoma, 547
Kwun Wah Wen and Robert Shigeo Ohgami

7.18 Burkitt Lymphoma Versus Other Lymphoma, 550
Kwun Wah Wen and Robert Shigeo Ohgami

7.19 Plasmablastic Lymphoma Versus Other Lymphoma, 553
Kwun Wah Wen and Robert Shigeo Ohgami

7.20 Posttransplant Lymphoproliferative Disorder Versus Reactive Lymphoid Lesions, 555
Kwun Wah Wen and Robert Shigeo Ohgami

7.21 Rectal Tonsil or Reactive Lymphoid Aggregate Versus Rectal Lymphoma, 559
Kwun Wah Wen and Robert Shigeo Ohgami

Part 8: Mesenchymal Tumors, 561

8.1 Gastrointestinal Stromal Tumor Versus Smooth Muscle or Neurogenic Tumor, 562
Leona A. Doyle and Kieran Sheahan

8.2 Inflammatory Myofibroblastic Tumor Versus Other Spindle Cell Neoplasms, 568
Leona A. Doyle and Kieran Sheahan

8.3 Intraabdominal Desmoid (Mesenteric Fibromatosis) Versus Gastrointestinal Stromal Tumor, 571
Andrew E. Horvai

8.4 Solitary Fibrous Tumor Versus Other Spindle Cell Neoplasms, 575
Leona A. Doyle and Kieran Sheahan

8.5 Lipoma Versus Liposarcoma, 579
Andrew E. Horvai

8.6 **Inflammatory Fibroid Polyp (Gastric or Small Intestine) Versus Other Spindle Cell Polyps, 584**
Ryan M. Gill

8.7 **Plexiform Fibromyxoma (Gastric or Duodenum) Versus Other Spindle Cell Lesions, 589**
Andrew E. Horvai

8.8 **Leiomyoma and Atypical Smooth Muscle Tumor, 593**
Andrew E. Horvai

8.9 **Leiomyosarcoma Versus Other Spindle Cell Neoplasms, 597**
Leona A. Doyle and Kieran Sheahan

8.10 **Hemangioma or Arteriovenous Malformation Versus Other Vascular Lesions, 600**
Andrew E. Horvai

8.11 **Kaposi Sarcoma (Any Gastrointestinal Site) Versus Other Spindle Cell Lesions, 604**
Andrew E. Horvai

8.12 **Angiosarcoma (Any Gastrointestinal Site) Versus Other Sarcomas, 607**
Leona A. Doyle and Kieran Sheahan

8.13 **Glomus Tumor (Stomach) Versus Other Neoplasms, 611**
Leona A. Doyle and Kieran Sheahan

8.14 **Vascular Malformations (Lymphatic, Venous, Arteriovenous) Versus Hemangioma, 614**
Andrew E. Horvai

8.15 **Schwannoma (Stomach) Versus Other Spindle Cell Lesions, 619**
Andrew E. Horvai

8.16 **Granular Cell Tumor Versus Atypical Granular Cell Tumor (Esophagus or Large Bowel), 623**
Andrew E. Horvai

8.17 **Perineurioma or Benign Fibroblastic Polyp (Large Bowel), 627**
Soo-Jin Cho

8.18 **Ganglioneuroma and Ganglioneuromatosis (Large Bowel), 631**
Soo-Jin Cho

8.19 **Perivascular Epithelioid Cell Tumor or Angiomyolipoma Versus Other Neoplasms, 634**
Leona A. Doyle and Kieran Sheahan

8.20 **Synovial Sarcoma (Stomach) Versus Other Sarcomas, 638**
Leona A. Doyle and Kieran Sheahan

8.21 **Malignant Gastrointestinal Neuroectodermal Tumor and Gastrointestinal Clear Cell Sarcoma (Small Intestine, Stomach, Large Intestine) Versus Melanoma, 642**
Nicole Panarelli

8.22 **Colonic Ulceration With Pseudomalignant Change, 648**
Soo-Jin Cho

8.23 **Endometrial Lesions and Their Mimics in the Gastrointestinal Tract, 651**
Nicholas Ladwig and Ryan M. Gill

Part 9: Systemic Disorders Involving the Gastrointestinal Tract, 659

9.1 **Amyloidosis Versus Normal Biopsy, 660**
Catherine E. Hagen and Benjamin J. Van Treeck

9.2 **Graft-Versus-Host Disease Versus Mycophenolate Injury, 665**
Catherine E. Hagen and Benjamin J. Van Treeck

9.3 **Scleroderma Versus Other Autoimmune Disorders, 669**
Catherine E. Hagen and Benjamin J. Van Treeck

9.4 **Human Immunodeficiency Virus Enteritis Versus Other Immune Deficiency Disorders, 672**
Catherine E. Hagen and Benjamin J. Van Treeck

9.5 **Esophageal Stricture Versus Immunoglobulin G4 Disease, 675**
Benjamin J. Van Treeck and Catherine E. Hagen

Part 10: Liver Metastasis, 677

10.1 **Metastatic Adenocarcinoma Versus Intrahepatic Cholangiocarcinoma, 678**
Dana Balitzer and Ryan M. Gill

10.2 **Resection of Colorectal Cancer Metastasis, 684**
Deyali Chatterjee, Eizaburo Sasatomi, and Heather L. Stevenson-Lerner

10.3 **Metastatic Small Intestinal Well-Differentiated NET Versus HCC Versus Other Neoplasms, 691**
Fahire Goknur Akarca and Sanjay Kakar

10.4 **Metastatic Neuroendocrine Carcinoma Versus Adenocarcinoma With Neuroendocrine Features, 699**
Dorukhan Bahcec and Sanjay Kakar

10.5 **Metastatic Hepatoid Carcinoma Versus Yolk Sac Tumor Versus HCC, 705**
Dana Balitzer and Ryan M. Gill

10.6 **Metastatic Epithelioid GIST Versus Primary/Metastatic Carcinoma, 710**
Raymond H. L. Yip and Sanjay Kakar

10.7 **Metastatic Anorectal Melanoma Versus Primary/Metastatic Tumors, 716**
Fahire Goknur Akarca and Sanjay Kakar

Index, 720

1.1

Eosinophilic Esophagitis Versus Reflux Esophagitis

AZFAR NEYAZ AND AATUR DILIP SINGHI

Case History With Endoscopic Findings

A 45-year-old male presented with dysphagia and odynophagia for the past 6 months. Upper endoscopy showed linear furrows and rings in the middle third of the esophagus (Fig. 1.1.1).

Microscopic Findings

The biopsy showed squamous mucosa with ≥ 15 eosinophils per high-power field that were concentrated toward the mucosal surface, as well as marked spongiosis and basal cell hyperplasia. A diagnosis of active esophagitis with features consistent with eosinophilic esophagitis (EoE) in the appropriate clinical setting was rendered (Fig. 1.1.2).

Differential Diagnosis

EoE and reflux esophagitis are the two most common causes of an eosinophil-rich inflammatory cell infiltrate in esophageal biopsies. The distinction between these two diagnostic entities is difficult by histology alone because of a marked overlap in morphologic features. Clinical and endoscopic

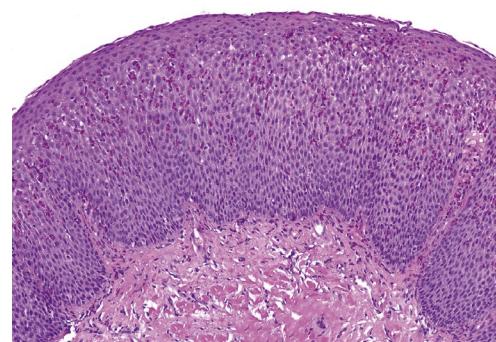
correlation is necessary for an accurate diagnosis.^{1,2} It is also important to remember that other causes may give rise to intraepithelial esophageal eosinophilia and include infections (e.g., fungal, viral, and parasitic organisms), eosinophilic gastroenteritis, pill esophagitis, graft-versus-host disease (GVHD), vasculitis, drug hypersensitivity, hypereosinophilic syndrome, celiac disease, Crohn's disease, connective tissue disease, and vesiculobullous disorders.^{3,4}

Eosinophilic Esophagitis

The key pathologic features of EoE are an eosinophil-dominant intraepithelial infiltrate with a peak count of ≥ 15 eosinophils per high-power field (or ~ 60 per mm^2). The infiltrate can be patchy, and the peak count reflects infiltration in the highest-density area anywhere in the biopsy. Additional findings that are often present and related to the density of the infiltrate include luminal eosinophilic micro-abscesses, degranulated eosinophils, surface desquamation, basal cell hyperplasia, marked intracellular edema (spongiosis), and lamina propria fibrosis^{2,5,6} (Fig. 1.1.3). In general, intraepithelial eosinophilia is more pronounced in EoE than in reflux esophagitis; however, in severe reflux esophagitis,



• **Fig. 1.1.1** The typical endoscopic appearance of eosinophilic esophagitis, which consists of circumferential rings and linear furrows diffusely involving the esophagus.



• **Fig. 1.1.2** Histologic features of eosinophilic esophagitis, which include prominent basal cell hyperplasia, markedly increased intraepithelial eosinophilic infiltrate (typically $> 15/\text{high-power field}$), and subepithelial fibrosis that results in dysphagia.