

Contents

Foreword by Ernest L. Mazzaferri, MD, MACP	vii
Preface	xi
Contributors	xix

Part I The Thyroid Nodule

1 The Thyroid Nodule: <i>Pathogenesis, Evaluation, and Risk of Malignancy</i> <i>Leonard Wartofsky</i>	3
2 Nonisotopic Imaging of the Neck in Patients with Thyroid Nodules or Cancer <i>Manfred Blum</i>	9
3 The Thyroid Nodule: <i>Fine Needle Aspiration Biopsy</i> <i>Yolanda C. Oertel</i>	35
4 The Thyroid Nodule: <i>Medical Management</i> <i>Leonard Wartofsky</i>	39
5 Thyroid Nodules and Cancer Risk: <i>Surgical Management</i> <i>Orlo H. Clark</i>	49

Part II Thyroid Cancer: *General Considerations*

6 Molecular Pathogenesis of Thyroid Cancer <i>James Figge</i>	57
7 Epidemiology of Thyroid Cancer <i>James Figge</i>	77
8 Radiation and Thyroid Cancer <i>James Figge, Timothy Jennings, and Gregory Gerasimov</i>	85
9 Classification of Thyroid Malignancies <i>James Oertel and Yolanda Oertel</i>	117

- 10 Thyroid Cancer in Children and Adolescents
Merrily Poth 121
- 11 Immunologic Aspects of Thyroid Follicular Neoplasms
James R. Baker, Jr. 129
- 12 Radioiodine Therapy of Thyroid Cancer: *General Considerations—I*
Gerald Johnston and Diane Sweeney 147
- 13 Radioiodine Therapy of Thyroid Cancer: *General Considerations—II*
Side Effects of Radioiodine Therapy for Thyroid Cancer
Diane Sweeney and Gerald Johnston 155
- 14 Recombinant Human Thyrotropin
Matthew D. Ringel..... 163
- 15 Chemotherapy for Thyroid Cancer
Lawrence S. Lessin and Myo Min 179

Part III Differentiated Tumors of the Thyroid Gland:

A. Papillary Carcinoma

- 16 Papillary Carcinoma: *Clinical Aspects*
Leonard Wartofsky 185
- 17 Papillary Carcinoma: *Cytology and Pathology*
James Oertel and Yolanda Oertel..... 193
- 18 Surgical Approach to Papillary Carcinoma
Orlo H. Clark 209
- 19 Differentiated Thyroid Carcinoma: *Radioiodine Therapy—I*
Gerald Johnston and Diane Sweeney 213
- 20 Chemotherapy of Differentiated (Papillary or Follicular) Thyroid Carcinoma
Lawrence S. Lessin and Myo Min 221
- 21 Management of Papillary Thyroid Carcinoma: *External Radiation Therapy*
Robert L. White..... 225

22 Papillary Thyroid Cancer: *Follow-Up*
Henry B. Burch 229

23 Radioiodine Treatment of Thyroid Cancer—II: *Maximizing Therapeutic and Diagnostic ¹³¹I Uptake*
Diane Sweeney and Gerald Johnston 239

24 An Approach to the Management of Patients with Scan Negative, Thyroglobulin Positive, Differentiated Thyroid Cancer: *Alternative Imaging Procedures*
Leonard Wartofsky 251

25 Papillary Thyroid Cancer: *Prognosis*
Henry B. Burch 263

26 Papillary Cancer: *Special Aspects in Children*
Merrily Poth 267

**Part IV Differentiated Tumors of the Thyroid Gland:
 B. Follicular Carcinoma**

27 Follicular Thyroid Carcinoma: *Clinical Aspects*
Leonard Wartofsky 279

28 Pathology of Follicular Cancer
James Oertel and Yolanda Oertel 289

29 Surgical Management of Follicular Cancer
Orlo H. Clark 297

30 Follicular Carcinoma of the Thyroid:
External Radiation Therapy
Robert L. White and Leonard Wartofsky 301

31 Follicular Thyroid Cancer: *Follow-Up*
Henry B. Burch 307

32 Follicular Thyroid Cancer: *Prognosis*
Henry B. Burch 311

- 33 Follicular Thyroid Cancer: *Special Aspects in Children and Adolescents*
Merrily Poth 315

Part V Undifferentiated Cancers:

A. Anaplastic Carcinoma

- 34 Anaplastic Carcinoma: *Clinical Aspects*
Steven I. Sherman 319
- 35 Anaplastic Carcinoma: *Pathology*
James Oertel and Yolanda Oertel..... 327
- 36 Anaplastic Carcinoma Management: *Surgery*
Orlo H. Clark 333
- 37 Chemotherapy of Anaplastic Thyroid Cancer
Lawrence S. Lessin and Myo Min 337
- 38 Management of Anaplastic Carcinoma: *External Radiation Therapy*
Robert L. White and Leonard Wartofsky 341
- 39 Anaplastic Carcinoma: *Prognosis*
Steven I. Sherman 345

Part VI Undifferentiated Cancers:

B. Lymphoma

- 40 Thyroid Lymphoma
Steven I. Sherman 351
- 41 Thyroid Lymphoma: *Pathology*
James Oertel and Yolanda Oertel..... 359

Part VII Undifferentiated Cancers:

C. Medullary Carcinoma

- 42 Medullary Thyroid Carcinoma
Douglas W. Ball..... 365
- 43 Medullary Thyroid Cancer: *Pathology*
James Oertel and Yolanda Oertel..... 383

44 Medullary Carcinoma of the Thyroid:
Nuclear Medicine Imaging and Treatment
Diane Sweeney and Gerald Johnston 389

45 Management of Medullary Carcinoma of the Thyroid: *Surgery*
Orlo H. Clark 399

46 Medullary Carcinoma Management: *External Radiation Therapy*
Robert L. White and Leonard Wartofsky..... 401

47 Medullary Carcinoma of the Thyroid: *Chemotherapy*
Lawrence S. Lessin and Myo Min 405

Part VIII Miscellaneous and Unusual Cancers of the Thyroid

48 Pathology of Miscellaneous and Unusual Cancers of the Thyroid
James Oertel and Yolanda Oertel..... 411

49 Clinical Aspects of Miscellaneous and Unusual Types of Thyroid Cancers
Matthew D. Ringel, Kenneth D. Burman, and Barry M. Shmookler 421

Part IX Future Directions

50 Thyroid Cancer: *DNA Ploidy, Tumor Markers, and Cancer-Causing Genes*
Michael McDermott 455

51 New Approaches to Chemotherapy for Thyroid Cancer
Lawrence S. Lessin and Myo Min 491

52 Advances in Radiotherapy for Thyroid Cancer
Robert L. White..... 495

Index 497