

SECOND EDITION

Diagnosis and Management of

OVARIAN DISORDERS

EDITED BY

ALBERT ALTCHERK

LIANE DELIGDISCH

NATHAN KASE



DIAGNOSIS AND MANAGEMENT OF OVARIAN DISORDERS

SECOND EDITION

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Dedicated to Our Families, Our Patients, and Our Colleagues.

*Dedicated to my beloved wife
Miriam Estelle Schargel Jawitz Altchek*

Albert Altchek

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Foreword to the First Edition

Anyone interested in women's health, especially those who offer care specifically to women will be refreshed and rewarded by this volume about the ovary. Authored and edited by a clinician and a pathologist, with contributions from experts in various aspects of the structures and functions of this multidimensional organ, this book is unique in its eclectic content and style.

Because it bases clinical diagnosis and treatment on a foundation of embryology, anatomy, physiology and steroid endocrinology, it offers a valuable translation of basic "bench" phenomena for use at the bedside in the care of patients. This wide-ranging text encompasses the functional, the dysfunctional and the neoplastic, from childhood to advanced age.

This book is a modern presentation of the scientific basis of health and diseases in a clear, practical style that will be

appreciated by physicians and students alike. It will take an important place in the library of everyone responsible for the health care of women, for ovarian function is central to reproduction and health.

I congratulate the editors for this excellent contribution, and take some pride in their sometime work under my aegis.

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Foreword to the Second Edition

The second edition of *Diagnosis and Management of Ovarian Disorders* by Albert Altchek, Lianne Deligdisch, and Nathan Kase is a unique contribution to literature. What this group has done is taken one organ (the ovary) and written an entire book on its function and dysfunction. The book is divided into three basic categories:

- Part I: Physiology, Pathology, and Basic Science
- Part II: Diagnostic Procedures and New Approaches
- Part III: Contemporary Management

The book is expanded, up-to-date, and cutting edge in regards to new techniques and therapies. The editors have brought together the leading authorities in the field to discuss their various disciplines and how it relates to ovarian pathology and physiology. Each chapter is well written and illustrated and there is editorial consistency.

In the patho-physiology and basic science area, an encyclopedic discussion occurs about the various tumors, both benign and malignant. This is coupled with introductory chapters on ovarian embryology, anatomy and histology, function of the normal ovary and ovarian steroid hormones, and recent progress in organogenesis. Special attention should be directed towards the important chapter on the Genetic Etiology of Sporadic Ovarian Cancer.

In the diagnostic techniques and investigation portion of the text, a broad spectrum of clinical areas are elaborated including new work on premature ovarian failure, ultrasonic evaluation of the ovary, the epidemiology of ovarian cancer and early diagnosis and screening for ovarian cancer.

Included is a chapter on *in vitro* fertilization, stem cell cloning, and the future of assisted reproductive technologies. In the unique section on Contemporary Management, Polycystic Ovary Syndrome is covered in depth including the newer therapeutic approaches utilizing the principals of treatment impacting on insulin resistance, areas of laparoscopic surgery of benign ovarian disorders, long-term management of ovarian cancer and psychological aspects of ovarian cancer, and BRCA testing.

At first, one would think a book only about the ovary would be a bit contrived. Yet the editors and contributors have carried this off with aplomb. It is an extremely interesting read with new and old insights eloquently elaborated. It draws in all factors of a single organ, but also teaches many other aspects of pathology and physiology. Of course, the authors could not have taken a more interesting organ to study than the ovary, since this is such an active and complex organ. The key, of course, is that in this book you can find "everything you wanted to know about the ovary."

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April, 2003

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Preface to the First Edition

Most gynecology textbooks deal with only one aspect of a problem. This book is different—it is a multidisciplinary panorama, ranging from molecular biology to psychiatry. It was developed for clinicians as a practical review and update, with useful new concepts, as well as a reference for sharpening both their practice and their surgical skills.

Each chapter is contributed by an experienced subspecialist who emphasizes essential basic knowledge and evaluates new findings which have clinical relevance to improved quality of care. This research would be an impossible task for the busy practicing physician.

Part I covers pathology and basic science including embryology; the recently appreciated self-regulating ovarian hormonal microenvironment and the adventures of the follicle; premature ovarian failure; cystic ovaries; cancer susceptibility; ovarian neoplasms; ovarian intraepithelial neoplasia (OIN) and computerized image analysis; the different germ cell neoplasms; the dramatic functioning neoplasms; the surprisingly high incidence of metastatic cancer; the confusing peritoneal endosalpingiosis and provocative serous papillary peritoneal carcinoma; the new technology of flow cytometry finding its role; and the developing understanding of oncogenes, tumor suppressor genes and carcinogenesis.

Part II deals with clinical diagnosis—signs, symptoms, and syndromes; the early diagnosis of cancer; the use of transvaginal color Doppler ultrasound; and serves as a practical guide for hormone testing.

Part III concerns contemporary management, and offers direct help in patient care. This includes reproductive endocrinology techniques using GnRH analog therapy for uterine myomas and endometriosis, and the “threshold” and

“add back” concepts; assisted reproduction presented step by step; management of the problems of the common polycystic ovarian syndrome; and advanced laparoscopy with “how to” advice; the different ovarian tumors of the young patient, with the possibility of preserving fertility even with ovarian malignancy; the realization that most torsed ovaries can be salvaged and the concept of pexy or plication of both ovaries; the management of ovarian tumors in pregnancy; what is involved in the initial laparotomy for ovarian cancer and its significance in prognosis and management planning; a French view of surgery for advanced cancer; determining the role of intraperitoneal chemotherapy with its high local concentration; the use of laparoscopy for ovarian cancer, the long term course of cancer (despite good results of platinum combination chemotherapy the frequent eventual cancer recurrence, the pros and cons of second-look surgery, and the atypical late metastases); and finally the thing that all dread—the shattering emotional impact of progressive ovarian cancer with its recurrent stressful episodes on the patient, her family, and the physician, and what to do about it.

The need to have a practical and readily available book required informative but concise chapters containing appropriate references and helpful illustrations.

I owe a debt of gratitude to my co-editor Dr. Liane Deligdisch, a world authority on gynecologic pathology, to the enthusiastic contributors who are leaders in their fields, to the encouragement of Lila Maron of Igaku-Shoin and to Fortune Uy, B.S.N., R.N. for her secretarial assistance.

Albert Altchek, M.D.

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