

---

## Preface

With recent significant advances in gynecology and obstetrics, physicians now face a new era of clinical medicine and decision making in daily practice. Beginning in the 1980s, the idea of evidence-based medicine (EBM) was introduced in clinical practice and medical education, the appropriate treatment modality for patients being based on clinical epidemiology. Various treatment guidelines have been published according to such epidemiological evidence along with the consensus of experts. Because the strongest evidence has been obtained from randomized clinical trials (RCTs) and meta-analyses, many physicians and patients have enthusiastically been involved in those RCTs. Thus, we have been living in the era of “epidemiology evidence-based medicine”. Although the ideal treatment should be specialized for a patient after considering the specific nature of the disease and the desire of each patient, we first present to the patient the standard treatment in the guidelines, which may be appropriate for the patient but sometimes is not, due to the heterogeneity of the disease. For years, therefore, physicians have been looking intently for a strategy to personalize the treatment for each patient. In the twenty-first century, we have gradually been approaching an era of new EBM, which is “genome evidence-based medicine”. The advance of comprehensive genomic analyses using next-generation sequencing (NGS) and gene expression profiling using DNA microarray along with bioinformatics has revealed the diversity of genome, epigenome, and expression profiles of disease. Development of novel drugs and technologies has made it possible to indicate the specific treatment according to the specific genomic nature of the disease in a patient. Thus, physicians are pleased to face this new era of “precision medicine” for clinical practice and decision making. This book presents the current perspective on precision medicine in the field of gynecology and obstetrics. The authors have made great efforts to update the scientific evidence in each field, and I would like to express my sincere thanks to all of them for the successful contribution of their chapters. I am also grateful to Ms. Yoko Arai at Springer Japan for her kind co-operation with me for the publication of this book.

Kyoto, Japan

Ikuro Konishi, M.D., Ph.D.

Precision Medicine in Gynecology and Obstetrics

Konishi, I. (Ed.)

2017, VIII, 250 p. 47 illus., 41 illus. in color., Hardcover

ISBN: 978-981-10-2488-7