

BOOK REVIEW

Monograph “The heterogeneity of histological types of breast cancer: sources, reasons and practical application”

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Publishing company Impressum, Chisinau, 2016, 178 pages

Breast cancer is the most common cancer in women worldwide. It is described as a group of heterogeneous diseases, different in clinical course, pathological aspects and therapeutic sensibility.

In the present study the author debated in details the origin of breast cancer, by specifying cellular components of ductal and lobular segments of normal mammary gland. The author skillfully described the role of different intrinsic and extrinsic factors during mammary epithelium differentiation, and performed a parallel connection with pathology as well.

The author demonstrated in details that previous classification of breast cancer, the histological one, has not a practical application. Dr. Fulga simultaneously reviews new methods, much more refined, based on the interpretation of genes expression and hormone receptor status. The author related also to his own results concerning estrogen, progesterone, androgen, HER2, Ki67, p53, BCL2, E-cadherin, EGFR receptors expression in invasive lobular and ductal breast cancer of NOS type. All data were grouped in molecular subtypes, accepted in contemporary oncology and those which are scientifically still deliberated.

The main, dominating idea developed in this study, is that a single histological type of breast cancer in fact includes all molecular characteristics, described initially by Perou et al. (2000) as intrinsic subtypes. The author demonstrated that ductal carcinomas of different grade of differentiation are in fact particular pathologies, with distinct genetical, immunohistochemical features. The Luminal group was the most often determined type of cancer, characterized with a high rate of proliferation.

This study was devised in 8 chapters, 43 subchapters, provided with 11 tables, 35 schemes and pictures, with a long list of 375 references.

The monograph starts with **Introduction** where the author stated clearly the background and purpose of the study.

Chapter I. **Material and methods.** The author described types of breast cancer and methods included in the monograph.

Chapter II. **Mammary gland in norm – the organ with dynamic structure.** The author described the cellular components, mainly epithelial one, in accordance with the

stage of development: prenatal and postnatal, highlighting the changes of structure during puberty, pregnancy and menopause.

Chapter III. **From theory to practice, from the norm to pathology.** Here the author described the expression of receptors for estrogen, progesteron, androgen, HER2, EGFR, Ki67, CK5, p53, BCL2 and E-cadherin during mammary epithelium differentiation.

Chapter IV. **Morphological and immunohistochemical heterogeneity of breast cancer.** In this chapter Dr. Fulga evaluated the importance of morphology and immunohistochemistry in prognosis and prediction.

Chapter V. **Molecular classification of breast cancer.** An extensive characteristic of molecular subtypes accepted in contemporary oncology and those which are still geneticaly, immunohistochemically debated.

Chapter VI. **The origin of breast cancer.** Here the author discussed about theories, hypothesis concerning cellular origin of breast cancer.

Chapter VII. **The epidemiology of resistance to chemotherapy.** The author described the possible mechanisms of resistance to hormonal, immune and chemo-therapy, plus highlighted the possible pathways of development of personalized treatment.

Chapter VIII. **Microambiance and carcinogenesis.** It's a short review of the role of cellular neighborhood in carcinogenesis.

The monograph finalizes with Conclusions and References.

Conclusion: “The heterogeneity of histological types of breast cancer: sources, reasons and practical application” is a nice, well-done and useful study which must be printed as a monograph, because practitioners of pathology, oncology and those who seek to understand the breast cancer development will find outstanding practical guidance and clinical findings in this book.

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