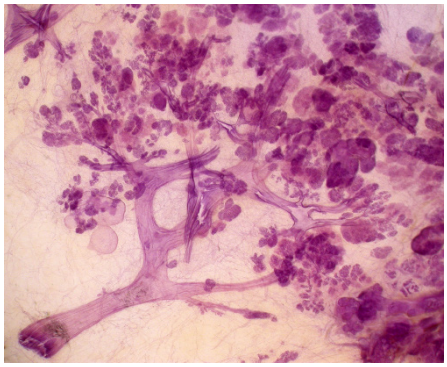
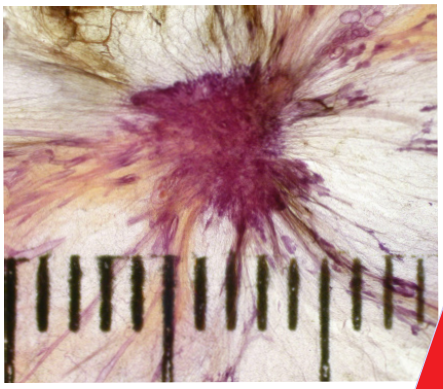


3D image of the breast tissue



<10 mm invasive breast cance

Sea urchin

26 hours of Category I CME credits

Mammography Education, Inc.

2019

BREAST SEMINAR SERIES

Faculty

LÁSZLÓ TABÁR, MD, FACR (Hon) Course Director
Professor emeritus of Radiology and

ALFONSO FRIGERIO, MD.
Screening Expert

Detection and Diagnosis of Breast Diseases Using the Multimodality Approach

A FULLY INTERACTIVE, UNIQUE LEARNING EXPERIENCE

NEW course design

June 18-21, 2019

TORINO, *Italy*

Centro Congressi Unione Industrialie
Via Vela 17, Torino

Designed for:

Radiologists • Surgeons • Pathologists
Gynecologists • Radiology Technologists

This course provides extensive knowledge about diagnostic breast imaging, differential diagnosis of breast diseases, implications for management and newest diagnostic technologies

FACULTY

László Tabár, MD, FACR (Hon).
Course Director

Professor emeritus of Radiology,
Department of Mammography
Falun, Sweden

Alfonso Frigerio, M.D.
Director of Mammography Screening
Regional Reference Center for
Breast Cancer Screening,
CPO-Piemonte,
AOU Città della Salute e della Scienza,
Torino, Italy

Images from the non-profit Tabar Foundation for Research and Education for Breast Cancer
www.tabarfoundation.org

Mammography Education, Inc. is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians. Mammography Education, Inc. designed these medical education activities for a maximum of **26 credit hours inCategory I** of the Physicians' Recognition Award of the American Medical Association. Each physician should claim only those hours of credit that he / she actually spent in the educational activity.

NEW COURSE DESIGN

* The lectures on each major subject will be followed by **interactive screening sessions** consisting of a mixture of normal and early cancer cases presented on the large screen exactly as they appear on a viewing station at screening. Using a specially provided polling program downloaded to each participant's smartphone or tablet, the attendees will be asked to vote anonymously on each case. The aggreate results will appear instantly for discussion and evaluation. This new course design gives immediate feedback demonstrating the effectiveness of various screening methods.

* During the course the attendees will progressively improve their interpretive expertise, as they learn the full spectrum of normal breast images, with all important findings explained with the help of 3-dimensional histology images.

* These skills will lead to fewer call-backs and greater confidence in reading a large number of mammograms.
* Immediate feedback and discussion of every case throughout every reading session.
* Special emphasis will be placed on finding early phase breast cancers.
* **All abnormal cases are fully worked up and the complete imaging workup will be presented in detail, including ultrasound, MRI and large section histopathology.**

CREDITS

We would like to thank the sponsors for their support of the teaching seminars of Mammography Education, Inc (list of vendors will be presented at the beginning of the course)

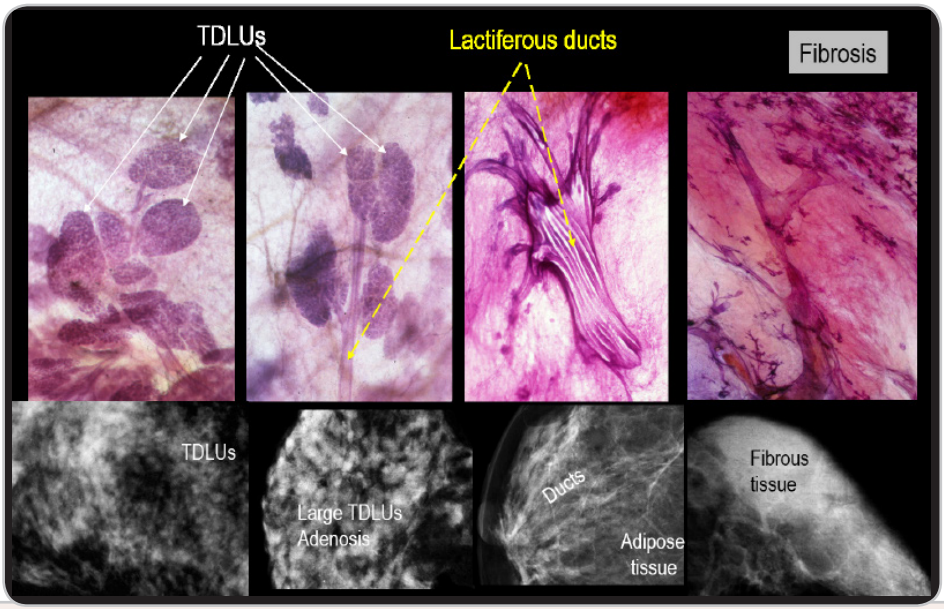
Day 1 Morning lectures between 8:30 AM - 12:00 PM. Breaks: 10:00 AM, 11:00 AM

8:30 INTRODUCTION FOLLOWED BY DIDACTIC LECTURES COVERING:

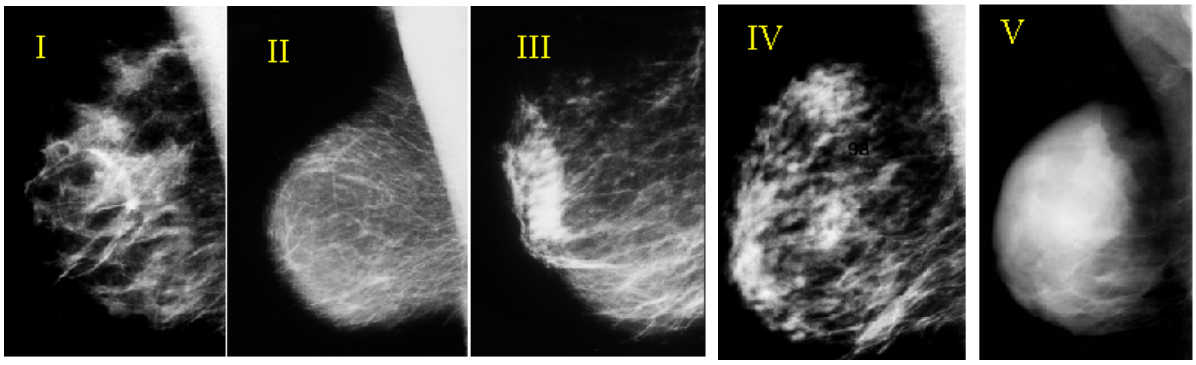
- A NEW ERA in the DIAGNOSIS and TREATMENT of BREAST CANCER. A SHORT HISTORY.

- **HOW TO READ A MAMMOGRAM.** THE BASIS FOR SKILLFUL AND EFFICIENT INTERPRETATION OF THE MAMMOGRAPHIC IMAGE

- Correlating 3-dimensional, subgross anatomy with mammography of the normal breast results in **increased confidence in reading a mammogram** *and* **finding small abnormalities**. Special training in large format thin and thick section (3D) histopathologic correlation enables the radiologist to account for every linear and nodular density on the mammogram.



The breast, unlike any other organ, has **five structurally different mammographic parenchymal patterns.**



12:00 PM - 1:00 PM L u n c h

2019

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Detection and Diagnosis of Breast Diseases
Using the Multimodality Approach. An interactive course.

László Tabár, MD, FACR (Hon)
Course Director

Day 1 Afternoon lectures: 1:00 PM - 5:30 PM. Breaks at 2:30 and 3:30 PM

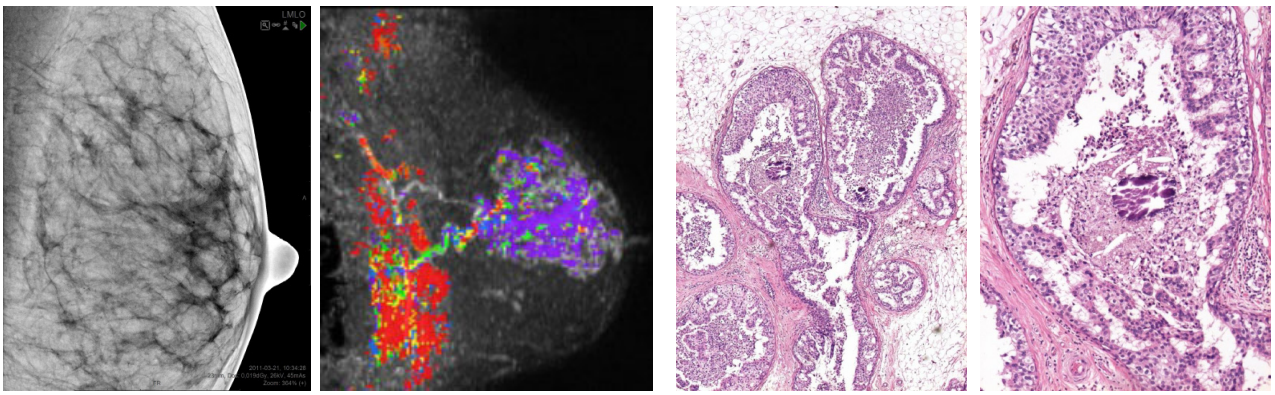
ALGORITHM FOR CLASSIFYING BREAST DISEASES ACCORDING TO THEIR SITE OF ORIGIN

HOW TO FIND THE INVASIVE BREAST CANCER WHEN IT IS STILL SMALL. *Malignant stellate and circular/oval-shaped lesions originating from the TDLUs (AAB)*: clinical presentation, histology, mammographic - MRI - ultrasound appearance and outcome.

- A systematic method for viewing mammograms. Areas on the mammogram where most breast cancers will be found. Viewing dense breasts. Viewing relatively easy-to-read breasts.

- The role of hand-held ultrasound / 3D automated ultrasound / MRI in the detection and workup of the findings. The multimodality approach

- **Interactive screening session:** Using what has just been taught, each participant will assess a mixture of normal and early cancer cases, and vote anonymously using a smartphone or tablet. The combined results will appear instantly for discussion. and evaluation.



Example: Multifocal invasive and *in situ* carcinoma, where the extensive micropapillary cancer originating from the major ducts was well demonstrated on breast MRI.

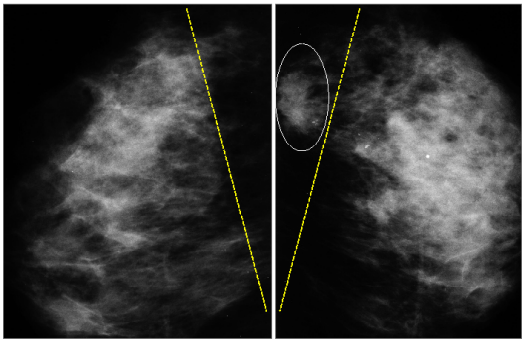
5:00 PM. End of Day 1.

Day 2 Morning lectures between 8:30 AM - 12:00 PM. Breaks:10:00 AM, 11:00 AM

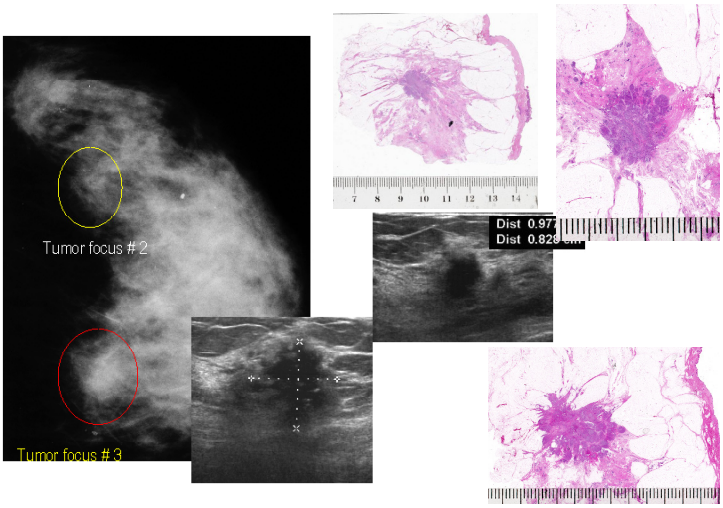
8:30 HOW TO FIND THE INVASIVE BREAST CANCER WHEN IT IS STILL SMALL. SCREENING COMBINED WITH AN ANALYTICAL APPROACH FOR THE DIFFERENTIAL DIAGNOSIS OF STELLATE / SPICULATED LESIONS (AAB) *Continuation*

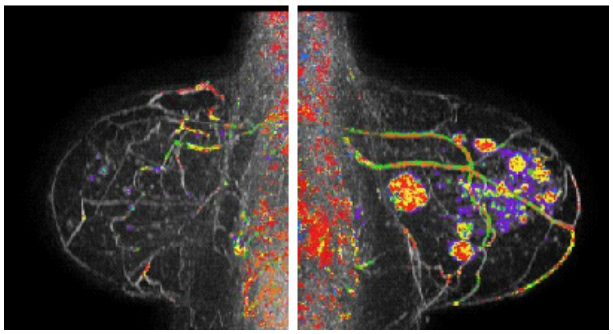
- A systematic method for viewing mammograms. Areas on the mammogram where most breast cancers will be found. Viewing dense breasts. Partenchymal contour changes, non-calcified architectural distortion, **unifocal / multifocal / diffuse breast cancers.**

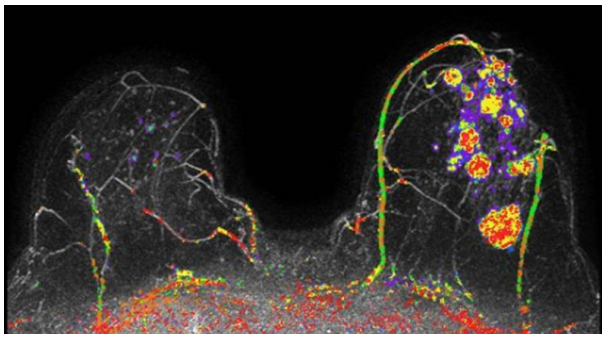
- **Interactive screening session:** Using what has just been taught, each participant will assess a mixture of normal and early cancer cases, and vote anonymously using a smartphone or tablet. The combined results will appear instantly for discussion. and evaluation.



Multifocal invasive and in situ carcinoma
on an area measuring 180X60 mm pN 4/9







12:00 PM - 1:00 PM L u n c h

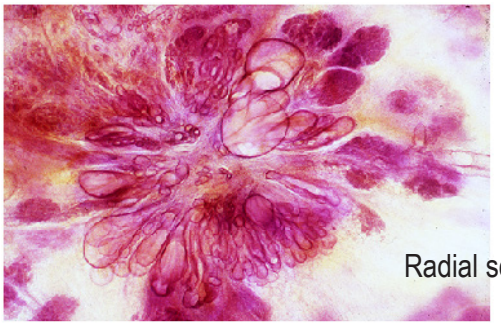
Day 2 Afternoon lectures: 1:00 PM - 5:00 PM. Breaks: 2:30 PM and 3:30 PM

1:00 AM ASYMMETRIC DENSITIES ON THE MAMMOGRAM

- *Didactic workup of non-specific asymmetric densities* **without** *architectural distortion*
- *Didactic workup of non-specific asymmetric densities* **with** *architectural distortion*

ANALYSIS of BENIGN RADIATING STRUCTURES on the mammogram, originating in the ducts

- Radial scar. A suggested algorithm for the workup of stellate lesions



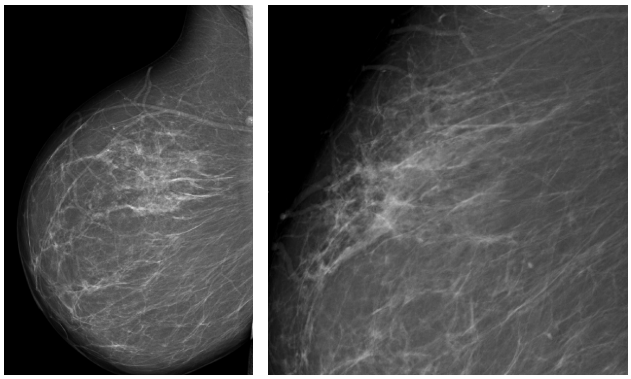
Radial scar

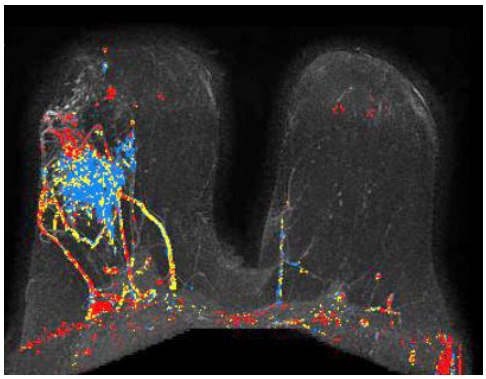
Neoductgenesis

ANALYSIS of MALIGNANT LESIONS PRESENTED as non-calcified RADIATING STRUCTURES on the mammogram. Clinical presentation, mammographic appearance and outcome:

- **Duct forming invasive carcinoma / Neoductgenesis** cases presenting on the mammogram as architectural distortion. The role of MRI in diagnosing diffuse breast cancer. A suggested algorithm for the workup of lesions with architectural distortion.

Interactive session for detecting architectural distortion on the mammogram.





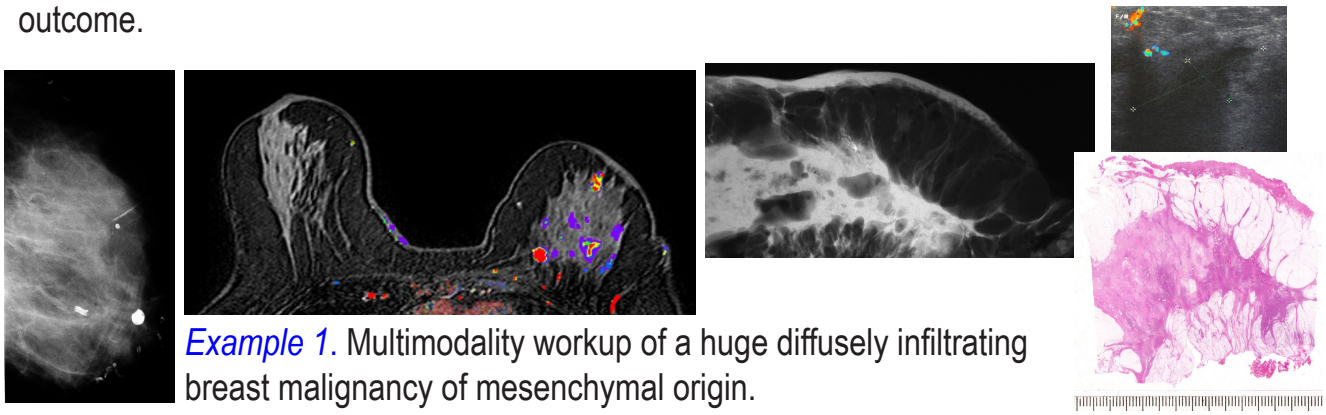
Non-calcified architectural distortion: extensive duct forming invasive cancer

5:00 PM. End of lectures Day 2.

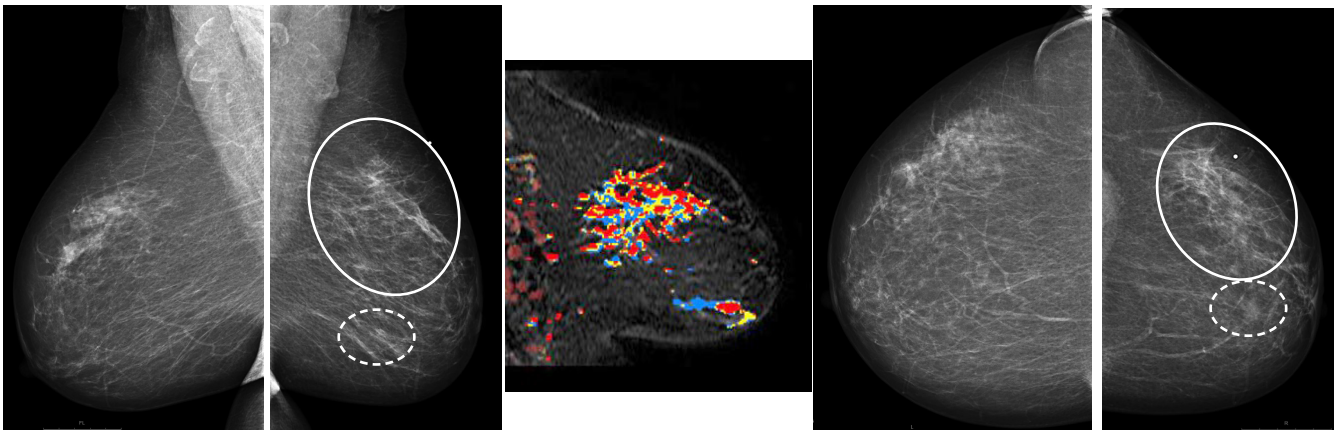
Day 3 Morning lectures: 8:30 AM - 12:00 PM. Breaks: 10:00 AM and 11:00 AM

8:30 PM ANALYSIS of MALIGNANT LESIONS PRESENTING as RADIATING STRUCTUREs on the mammogram. Clinical presentation, mammographic appearance and outcome, cont.

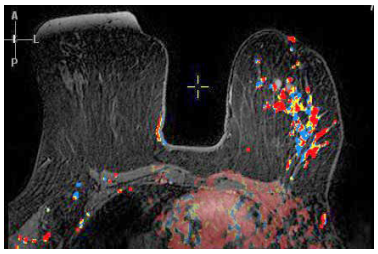
2) Diffuse forms of invasive breast cancer: the most deceptive and frequently missed cancer of the breast. The value of ultrasound and MRI in finding and diagnosis invasive lobular cancer subtypes. Case demonstrations, histologic-imaging correlation. Long-term outcome.



Example 1. Multimodality workup of a huge diffusely infiltrating breast malignancy of mesenchymal origin.



Example 2. Diffusely infiltrating (spider's web-like) carcinoma of mesenchyal origin in the upper half of the breast and a shperical, round lesion, originating from the TDLU (AAB) is seen in the lower portion of the left breast.



Interactive session for detecting architectural distortion on the mammogram.

12:00 PM - 1:00 PM L u n c h

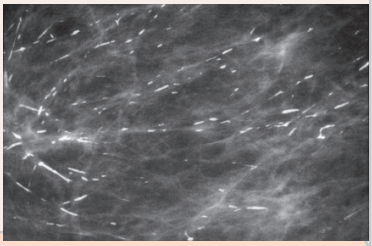
Day 3 Afternoon lectures: 1:00 PM - 5:00 PM. Breaks at 2:30 and 3:30 PM

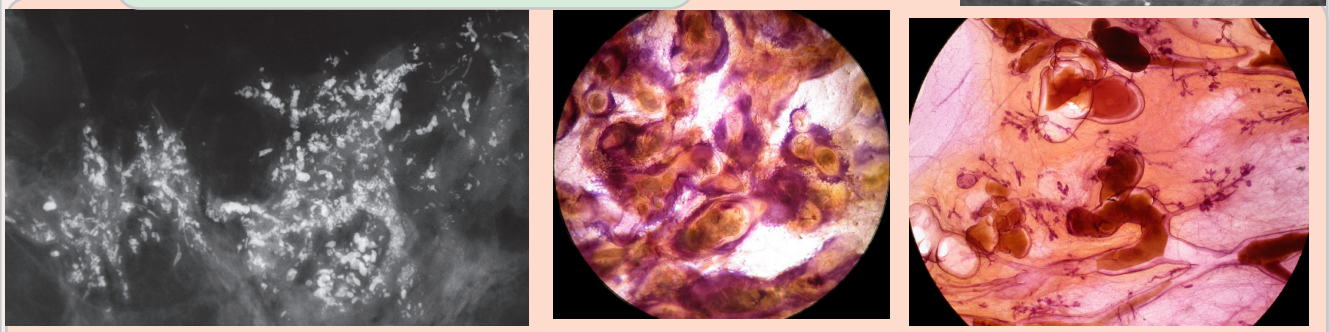
1:00 PM INTERACTIVE LECTURE SERIES WILL COVER THE FOLLOWING TOPICS.

ALGORITHM FOR CLASSIFYING BREAST DISEASES ACCORDING TO THEIR SITE OF ORIGIN

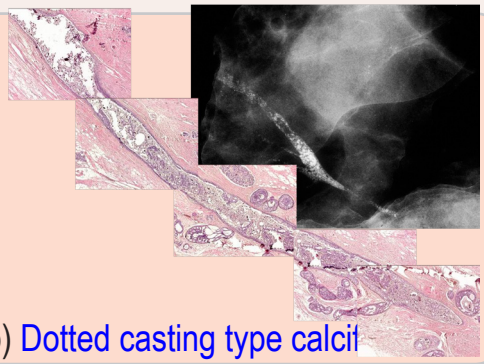
Breast diseases originating in the major ducts

- **Benign type calcifications** originating in the major ducts
  - a) Secretory disease type calcifications
- **Malignant type calcifications** originating in the major ducts
- **Interactive calcification analysis.**



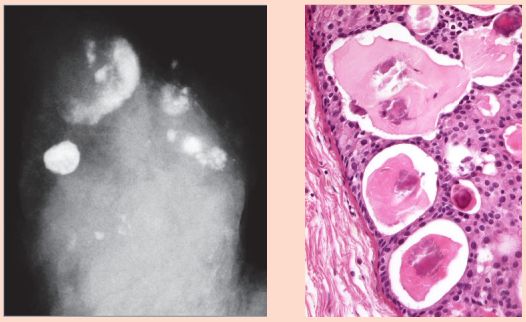


a) Fragmented casting type calcifications.

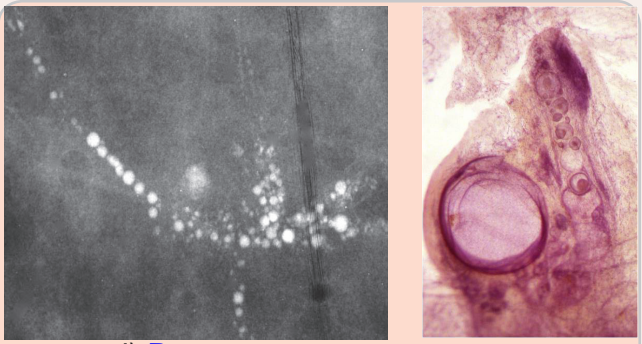


b) Dotted casting type calcif

* **Four different malignant type calcifications** developing in the major ducts: **a)** fragmented casting type **b**) dotted casting type **c)** skipping stone-like **d)** pearl necklace-like.
* The concept of **neoductgenesis**. Long-term follow-up results. New aspects, correct terminology.
* The role of breast MRI examination in demonstrating the extent of Gr 3 in situ carcinoma.
* Mammographic/3D histologic correlation helping to explain the underlying pathophysiology and outcome.



c) Skipping stone-like calcifications



d) Pearl necklace-like calcifica-

5:00 End of the lectures for Day 3 **5:05** ART HISTORY LECTURE: - A FRIGERIO

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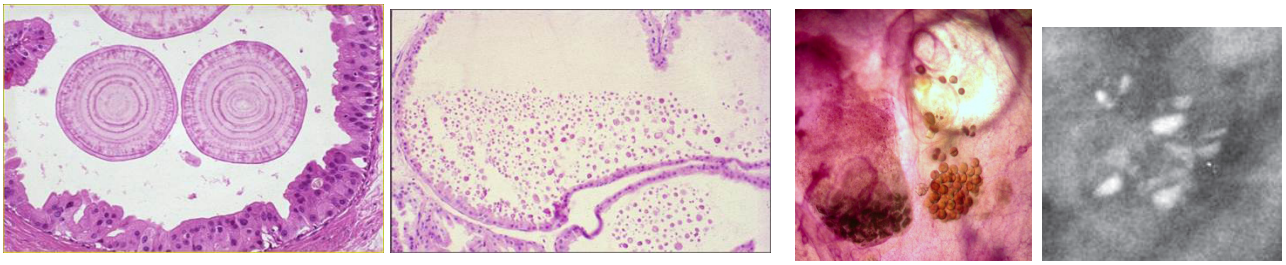
Course Director

Day 4 Morning lectures: 8:00 AM - 1:00 PM. Breaks at 10:00 and 11:00 AM

8:00 AM ALGORITHM FOR CLASSIFYING BREAST DISEASES ACCORDING TO THEIR SITE OF ORIGIN

- **Benign breast diseases originating in the TDLU** and associated with calcifications on the mammogram -

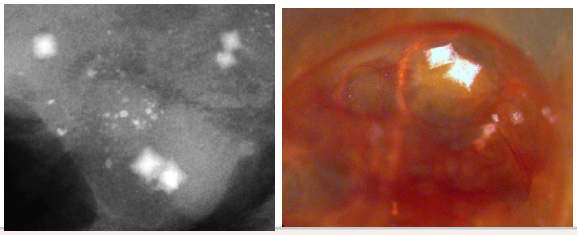
  - **Fibrocystic change. Fibroadenoma. Different types of adenosis.** Understanding pathophysiology leading to calcified and non-calcified hyperplastic breast changes.



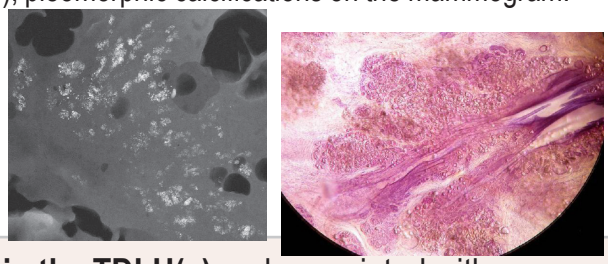
Conventional and 3D histology images of small breast cysts containing sediment of psammoma body-like calcifications, seen as "teacup-like calcifications on the mammogram.

- Detailed analysis of calcifications associated with hyperplastic breast changes
  Weddellites (A), powdery calcifications (B), pleomorphic calcifications on the mammogram.

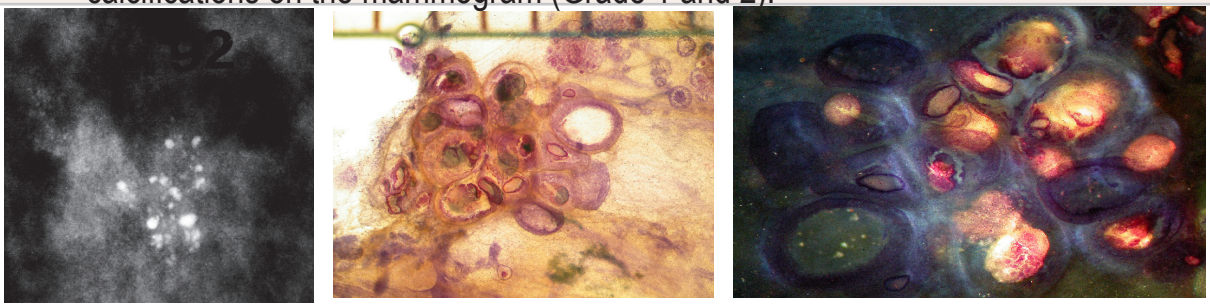
A



B



- **Malignant breast diseases originating in the TDLU(s)** and associated with calcifications on the mammogram (Grade 1 and 2).



Grade 2 cancer *in situ:* Mammographic / 3-D histologic / MRI correlation of cases with crushed stone-like/pleomorphic calcifications on the mammogram.

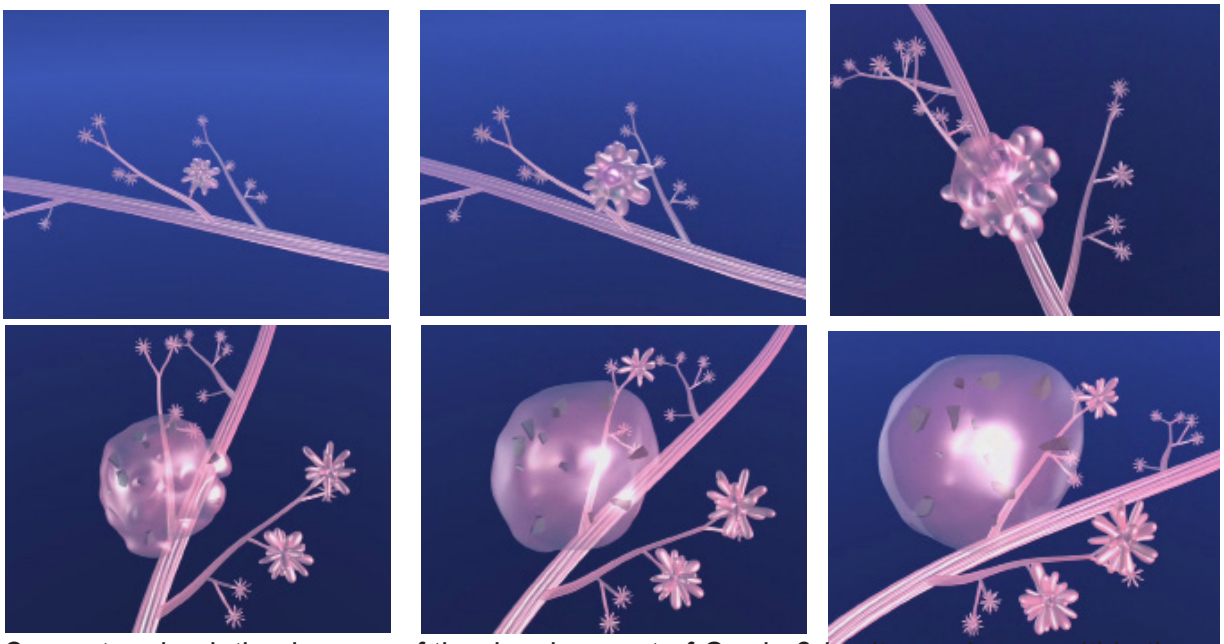
1:00 End of the course

x

For more information and registration please contact:

Mammography Education, Inc.
4429 E. Spur Drive
CAVE CREEK, AZ 85331, USA

Phone: (480) 419 0227
Fax: (480) 419 0219
e-mail: info@mammographyed.com
Internet: www.mammographyed.com



Computer simulation images of the development of Grade 2 *in situ* carcinoma within the TDLU. The lobule becomes gradually distended and deformed. Calcifications are formed within the necrotic debris and are seen on the mammogram as **crushed stone-like calcifications**.

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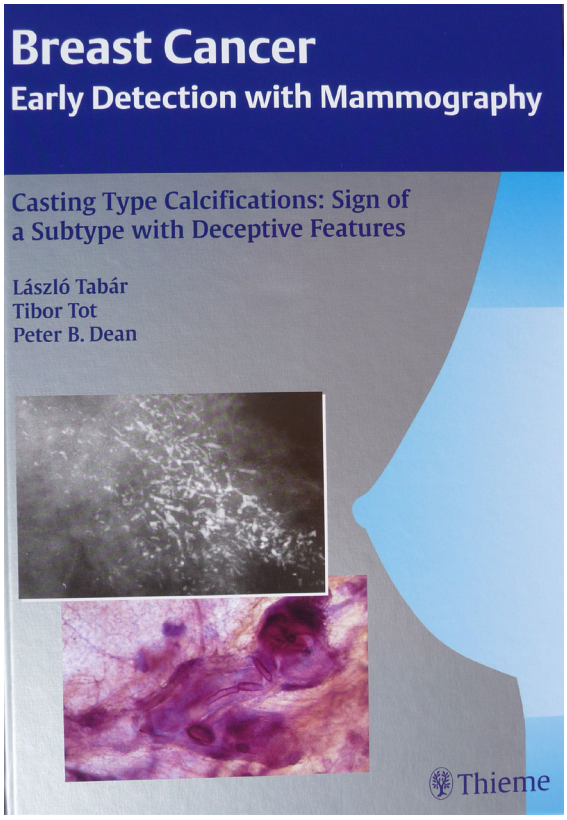

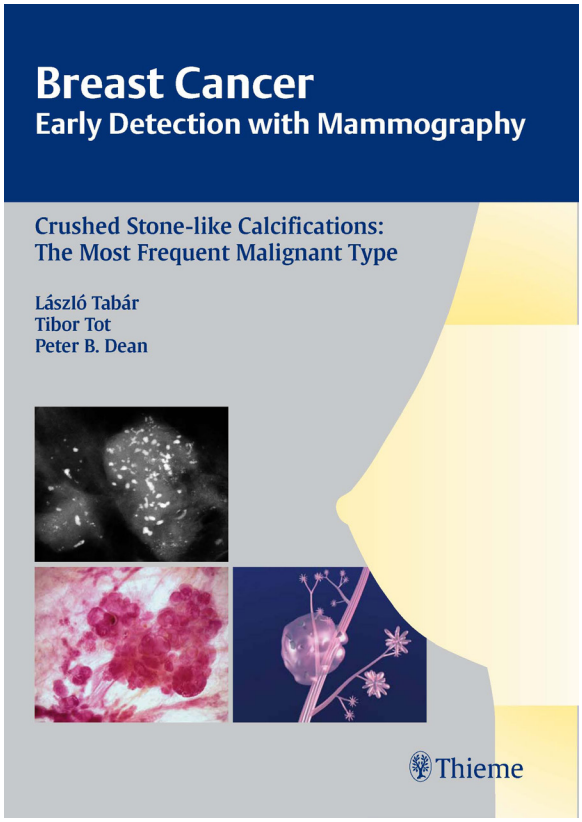

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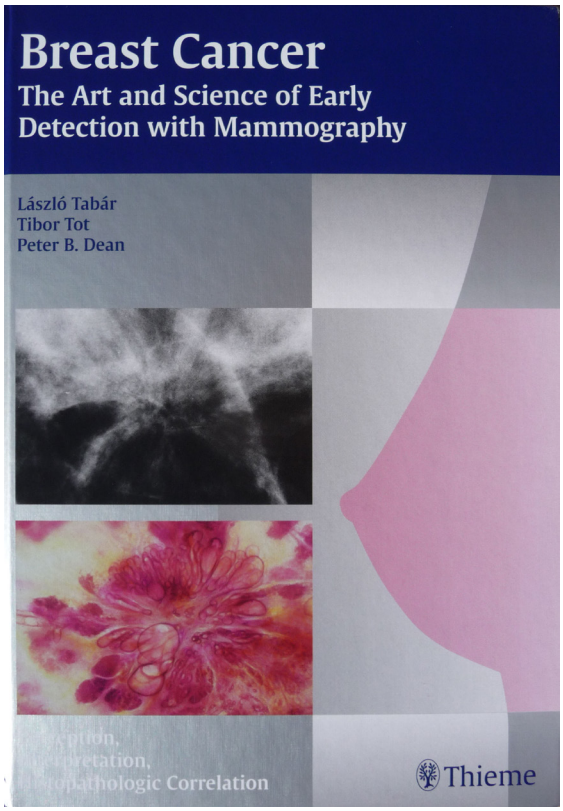

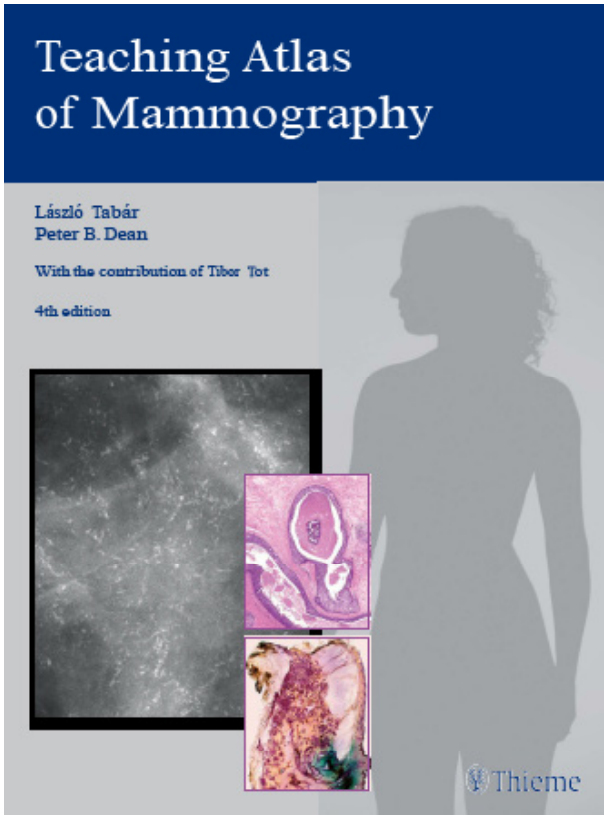

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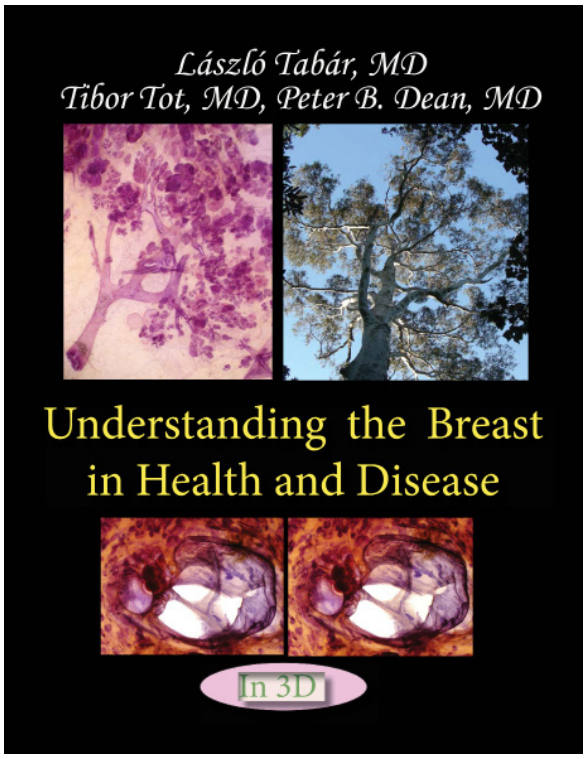

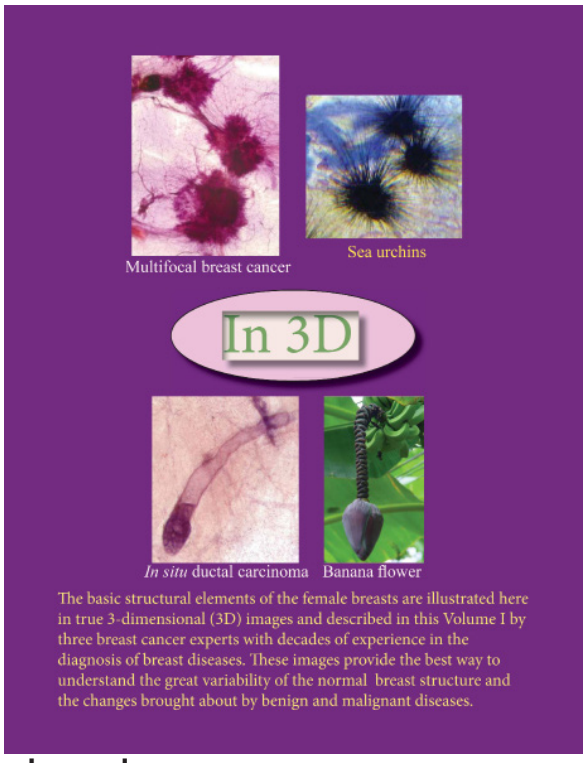

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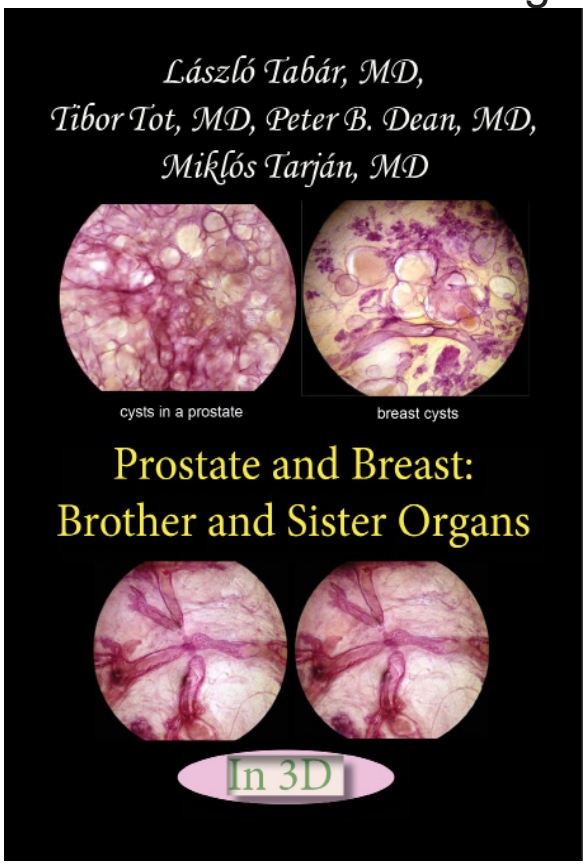

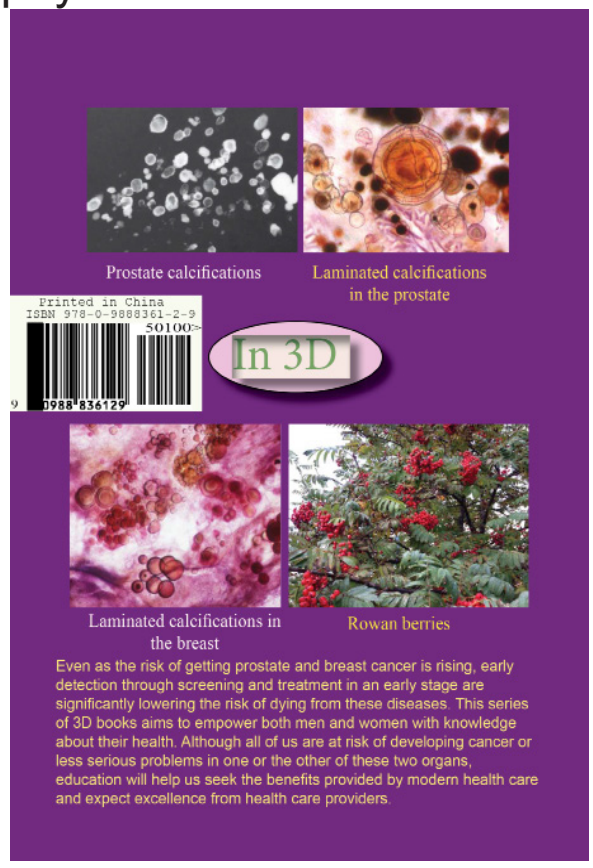

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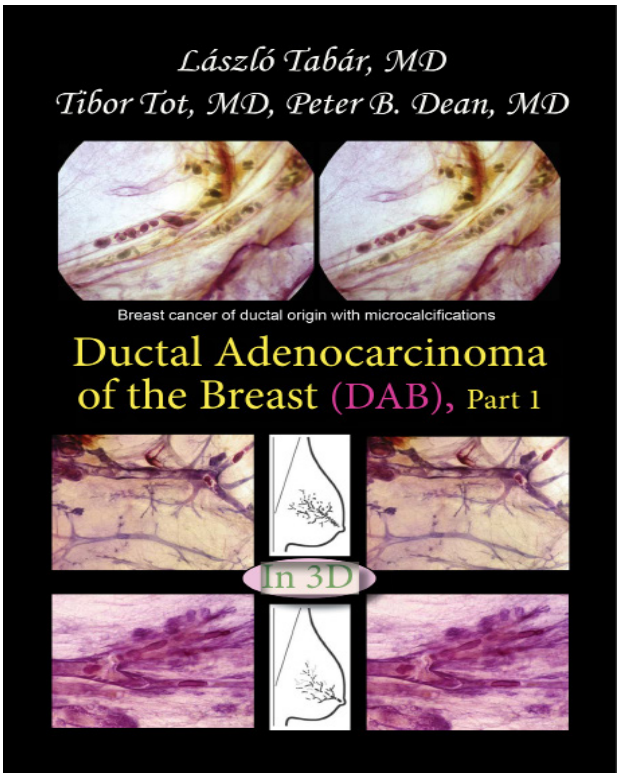

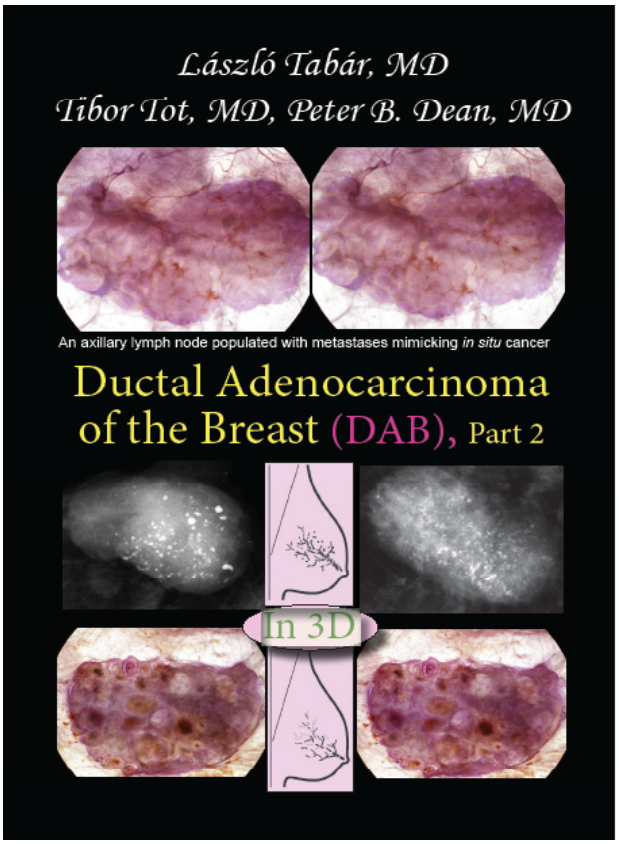

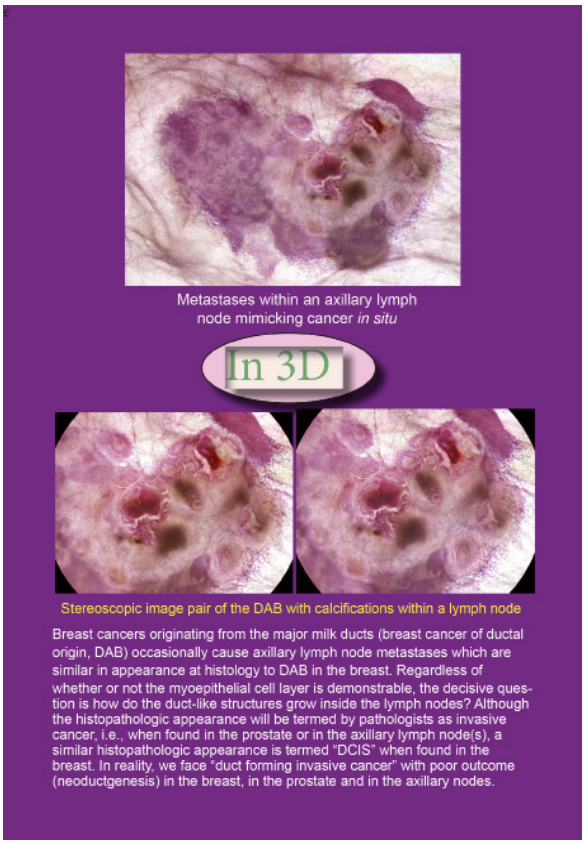

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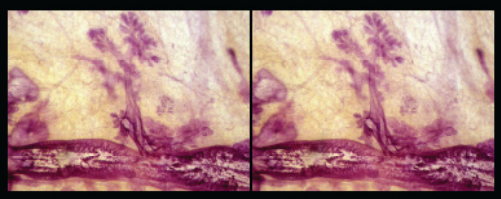
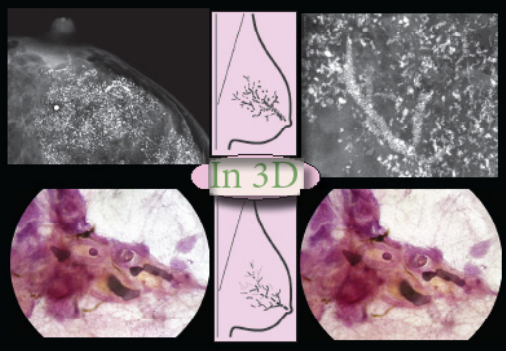
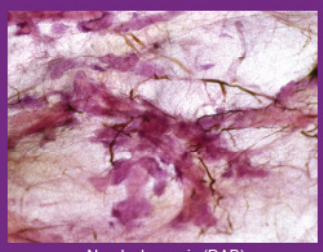
Tibor Tot, MD, Peter B. Dean, MD



Micropapillary breast cancer of ductal origin associated with a normal TDLU

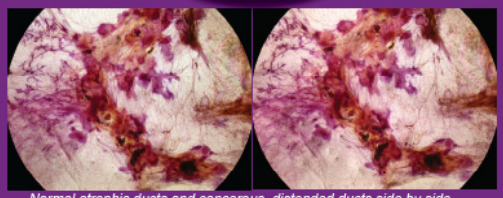
Ductal Adenocarcinoma of the Breast (DAB), Part 3





Neoductgenesis (DAB)
associated with angioneogenesis

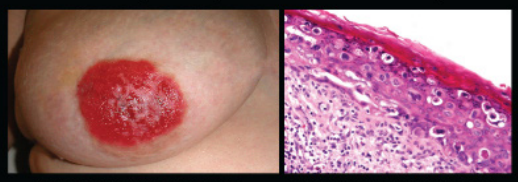
In 3D



Normal atrophic ducts and cancerous, distended ducts side by side

Breast cancers that originate in the major milk ducts (ductal adenocarcinoma of the breast, DAB) are diffuse and often extensive. The disease may occupy an entire lobe from the nipple to the chest wall, and frequently extends close to the skin. For these reasons, breast conserving surgery and skin or nipple sparing mastectomy of DAB cases carry a higher risk of local/regional/distant recurrence. In addition: 1) a considerable portion of the disease may lack calcifications, often occult for the imaging methods. 2) This subtype of breast cancer is less responsive to postoperative radiotherapy.

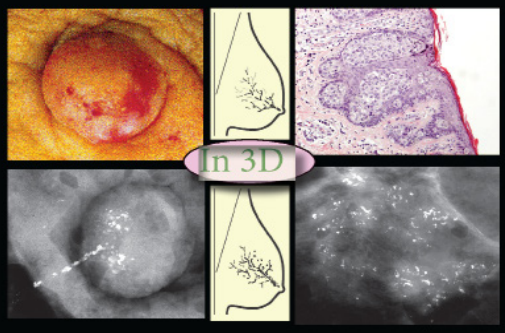
László Tabár, MD
Tibor Tot, MD, Peter B. Dean, MD

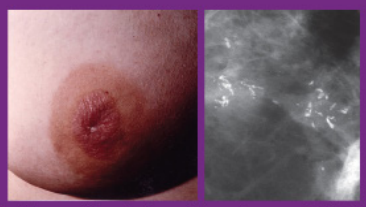


Paget's disease of the nipple

Paget's cells in the epidermis of the nipple

Ductal Adenocarcinoma of the Breast (DAB), Part 4





Paget's disease of the nipple and breast cancer of ductal origin

In 3D

Cancer-filled duct in Paget's disease with angioneogenesis

One of the features which is unique to breast cancers originating from the major ducts (DAB) is Paget's disease of the breast. It was first described by the British pathologist, James Paget in 1874. He described 14 cases of breast cancer associated with an eczema-like skin change of the nipple and areola. Almost 1% of all breast cancers present with Paget's disease of the nipple, and the diagnosis is confirmed by histologically demonstrating the Paget cells of the affected epidermis. The underlying breast cancer can be best demonstrated by combining all breast imaging methods. Of these, breast MRI is the most sensitive, showing the presence and true extent of the underlying DAB, often before calcifications can be detected on the mammogram.

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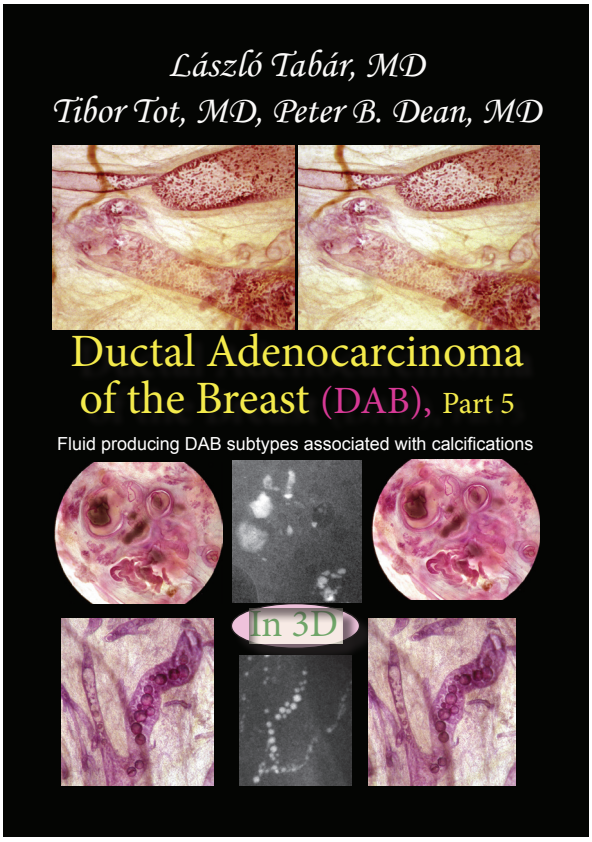

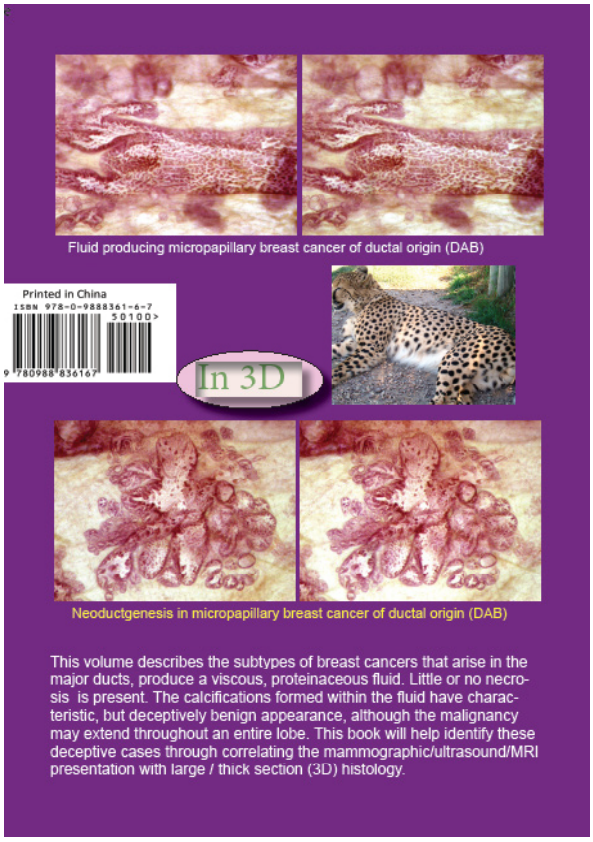

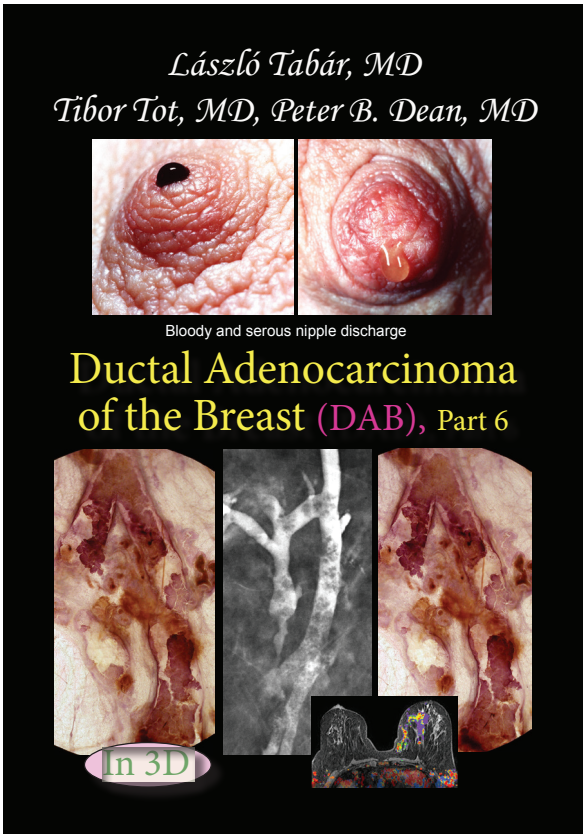

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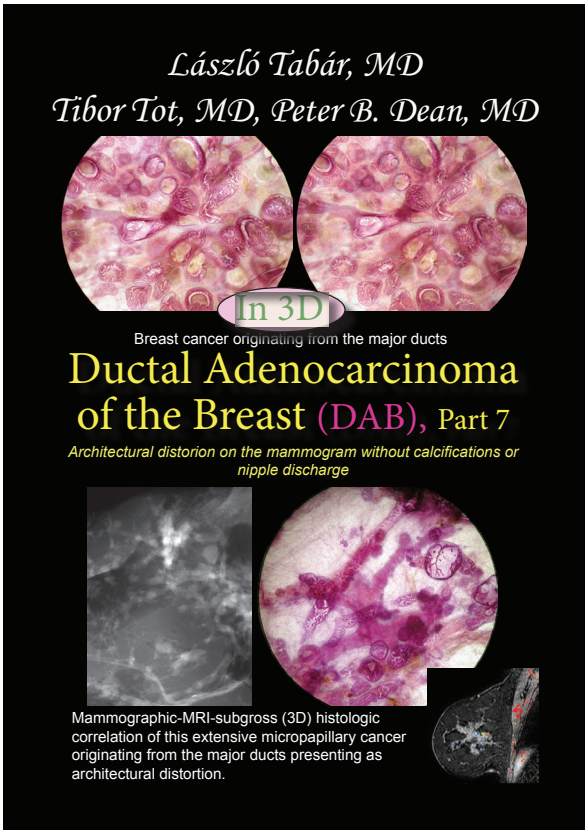

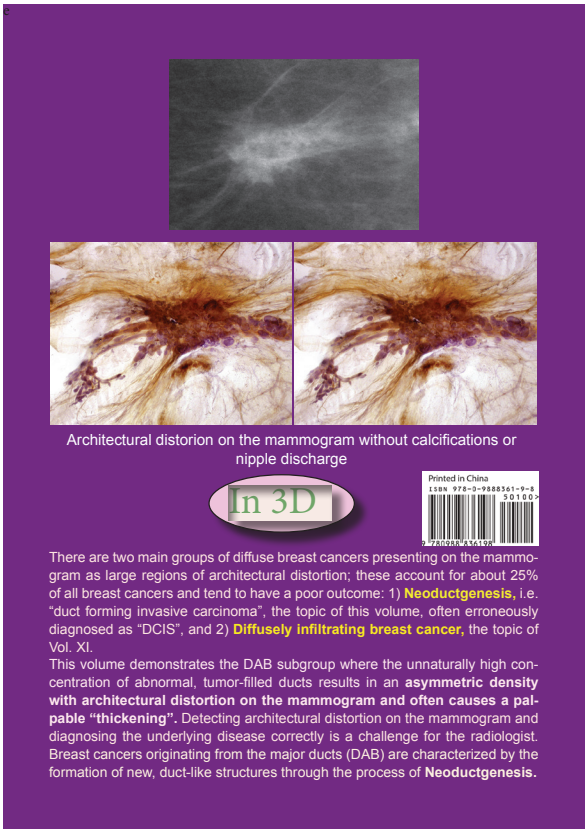

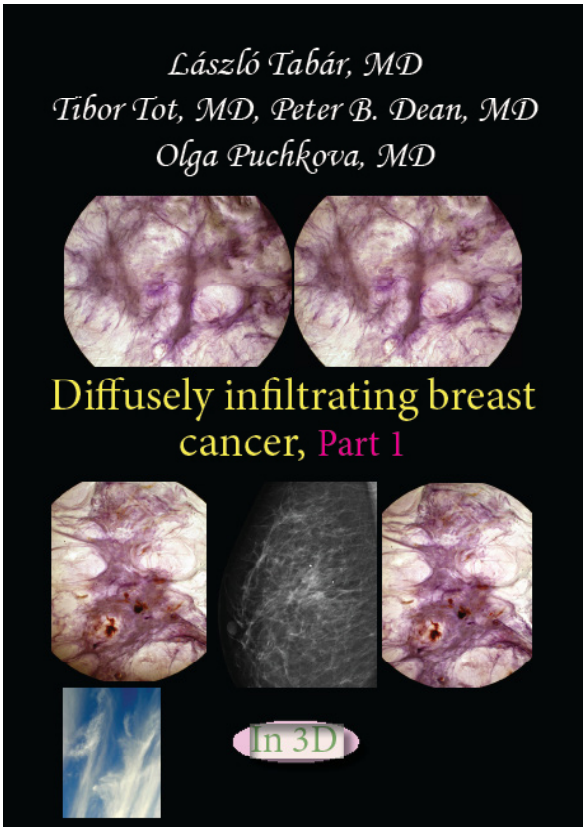

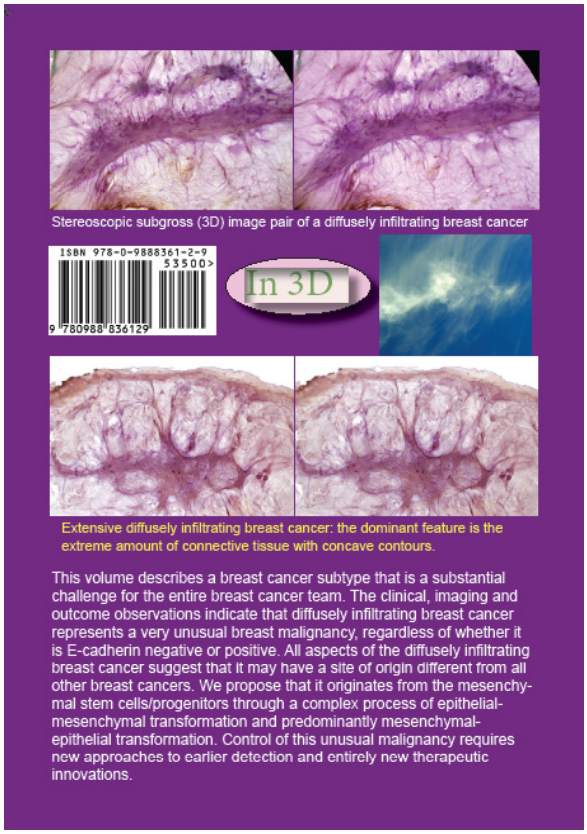

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The mission of the Tabar Foundation is to support research and education to fight against breast cancer. Dr. Tabar's own photographs are now available as high-quality prints. All proceeds from your tax-deductible purchase will support young physicians who are learning how to detect breast cancer when it is still curable. Visit: tabarfoundation.org