Kopans
Chapter 11 : page 329
Good screening program
Should pick up 30-50% 1 cm or less in size
20-30 % should be DCIS
First time screens : Tough, miss more that you pick up initially
but they can be caught early with subsequent screens .

Chapter 25 : Page 1013 : The False Negative Mammogram
Dense breasts (DBT helps now)
Many , if not most occur in women whose tissues are
not dense. That is where positioning comes into the discussion .

1. Not properly positioned.
2. Tissue not included(PNL, IMF missing etc.)
3. Motion
4. Tissue not compressed
5. Nipple in cc view not profiled (these tumors may be more advanced when detected.)
6. Poor quality images not high resolution (equipment). Not a problem in our Region.
7. Inability to get to blind spots despite best efforts (high in armpit, close to chest wall) . About 1/2 missed are unavoidable!!! These tumors just do not produce changes that we can see. 1/3 are missed by interpretor error. Just miss them. CAD and experience helps.

Keys to Early Detection are:

- Compassionate , Patient, Dedicated Technologist and a Relaxed Patient
- High quality images
- Well trained, motivated technologists
- Experienced interpreter; remember experienced interpreter cannot compensate for poor quality mammography and strict attention to positioning and quality control should be a constant obligation.

2019 Mammography Imaging Update

Ruby L. Belton, M.D.

6th Annual PLEA of GRNY

Multidisciplinary CME Accredited City Wide Breast Cancer Seminar

Breast Cancer Screening, Positioning, and Early Detection

How Mammography Can Save a Life

References

1. Third Edition
   BREAST IMAGING
   Daniel B. Kopans
   Lippincott Williams & Wilkins
   Chapters 3: Epidemiology, Etiology risk factors and Survival from breast cancer
   Chapter 6: Staging of Breast Cancer
   Chapter 10: Mammographic Positioning
   Chapter 25: The Breast Report and Reasons for false negative mammograms

2. IARC Handbooks of Cancer Prevention
   International Agency for Research on Cancer
   - World Health Organization
   Volume 7
   Breast Cancer Screening

3. Healthline
   Kopans:
   Chapter 6 page 205 TNM
   (T = Tumor size)
   (N = Nodes)
   (M = Metastasis)
   T0, T1 , T 2, T3
   T0 : DCIS

T1: Tumor 2 cm or less in greatest dimension (a,b,c)
T2: Tumor 2-5 cm
T3: Tumor greater than 5 cm
T4: Tumor any size with chest wall involvement excluding pectoral muscle, skin

N = Regional Lymph Nodes
NX: Unable to evaluate / removed previously
N0: no nodes
N1: movable node on same side as tumor
N2: Metastasis to nodes on same side, matted or internal mammary
N3: Infraclavicular nodes

M = Metatasis
Mx : Cannot be assessed
M0: No distant metastasis
M1: Distant metastasis

Healthline

Stage Matters

	US Women	US men
Stage 0:	100%	~ same
Stage 1:	100 %	
Stage II:	93%	
Stage III:	72%	
Stage IV:	22 %	

NCI estimates 61.4% of women are diagnosed stage 1

Mammography vs. Clinical
3mm vs 3 cm