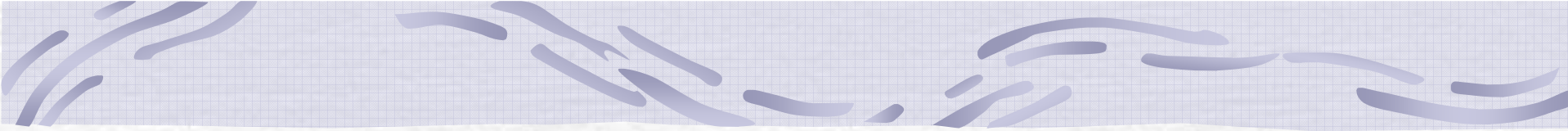


BREAST CANCER TYPES, STAGING & PROGNOSTIC PARAMETER

**Dr. Manoj J. Shah, M.D., D.C.P.
Professor & Head,
Department of Pathology,
G.C.R.I., Ahmedabad.**

- 
- One million new cases every year world wide
 - In USA one lac new cases every year, 30000 die of it.
 - In India it is commonest cancer in females.
- 

RISK FACTORS

- Geography
- Family History
- Menstrual & Reproductive Factors
- Fibrocystic Disease with Epithelial Hyperplasia
- Oral Estrogen & Hormone Replacement Therapy
- Radiation

CLASSIFICATION

1) Epithelial tumors

- DCIS IDC
- LCIS ILC

2) Mesenchymal tumors

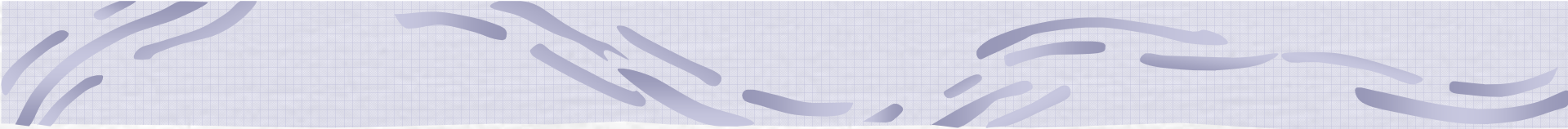
3) Other type of tumors

DCIS TYPES

- Comedo
- Cribriform
- Solid
- Clinging
- Micropapillary
- Papillary type
- Neuroendocrine type

INVASIVE DUCT CARCINOMA TYPES

- TUBULAR
- CRIBRIFORM
- MUCINOUS
- MEDULLARY
- NOS
- APOCRINE
- PAPILLARY

- 
- JUVENILE SEVETORY CARCINOMA
 - METAPLASTIC
 - NEUROENDOCRINE TYPE TUMOR
 - ADENOID CYSTIC CARCINOMA
 - MUCOEPIDERMOID CARCINOMA
 - LOW GRADE ADENOSQUAMOUS CARCINOMA
 - MALIGNANT MYOEPITHELIOMA
- 

INVASIVE LOBULAR CARCINOMA

- CONVENTIONAL
- TUBULOALVEOLAR
- SIGNET RING TYPE

Mesenchymal Type Tumors

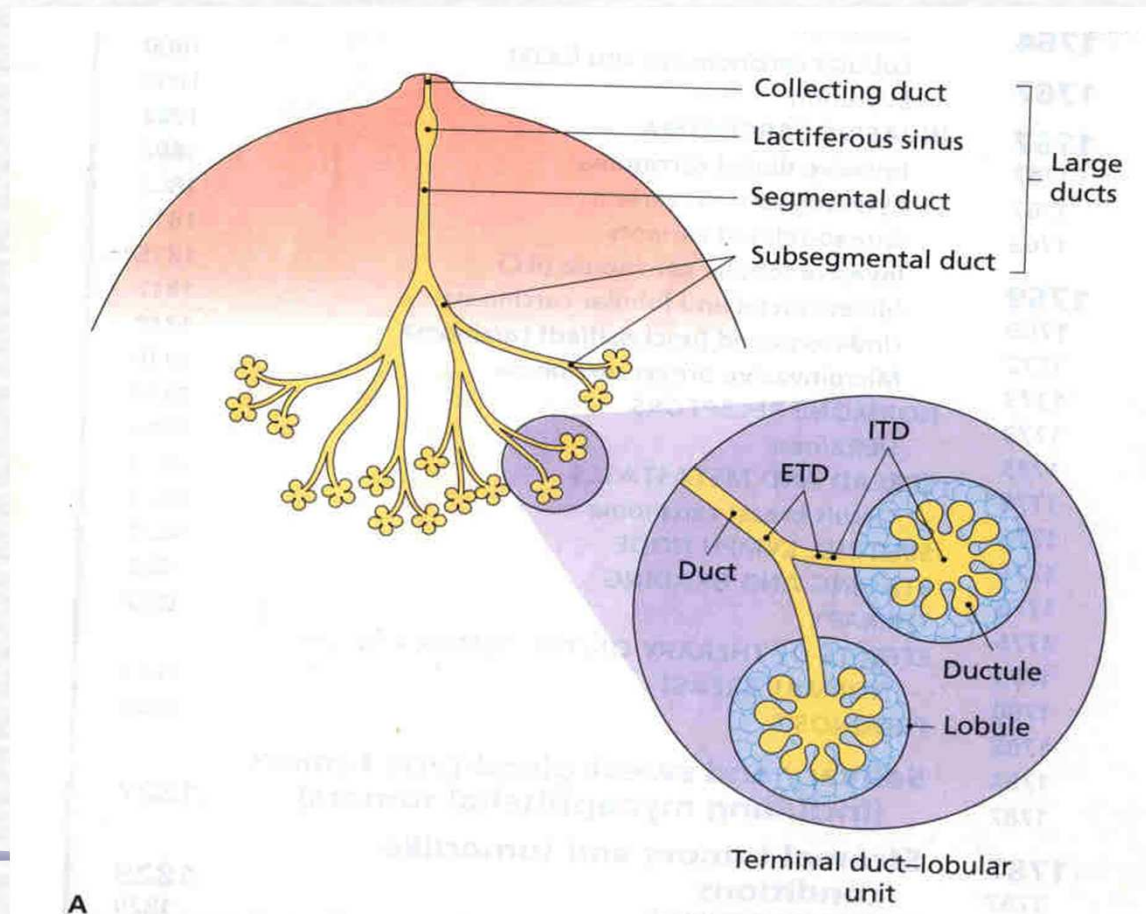
- MALIGNANT PHYLLOIDES TUMOR
- STROMAL SARCOMA
- ANGIOSARCOMA

Other Types

- NHL
- HD
- PLASMACYTOMA
- LEUKEMIC INFILTRATE
- SKIN TUMORS

➤ **PAGET'S DISEASE OF NIPPLE AND AREOLA**

Normal anatomy of breast



INTRA DUCTAL CARCINOMA MICRO PAPILLARY

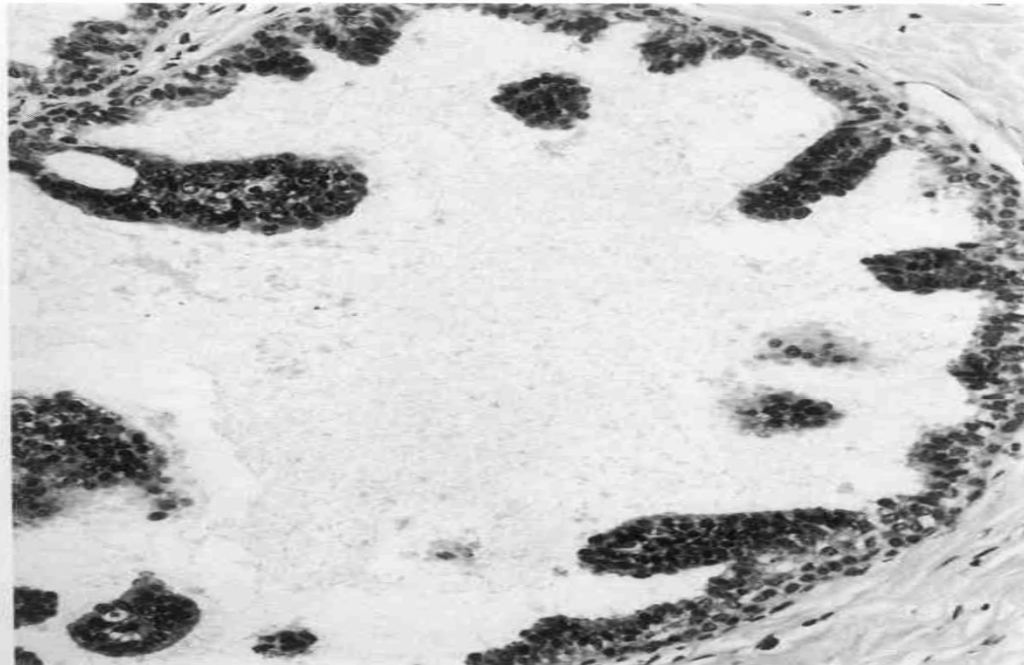
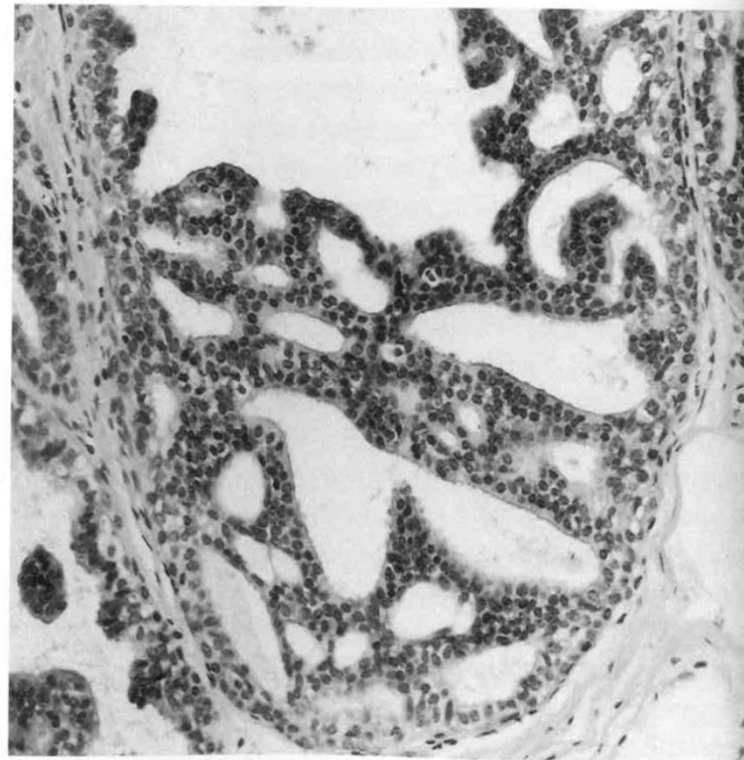


Figure 227
INTRADUCTAL CARCINOMA
Micropapillary growth pattern in which discontinuous cellular fragments are related to the plane of sectioning. (Figures 227 and 228 are from the same patient.)

INTRADUCTAL CARCINOMA - CRIBRIFORM

Figure 231
INTRADUCTAL CARCINOMA

The cribriform growth pattern results from the merging of intraductal bridges of epithelial cells. (Figures 231 and 232 are from the same patient.)



HISTOLOGIC GRADE WELL DIFFERENTIATED PATTERN

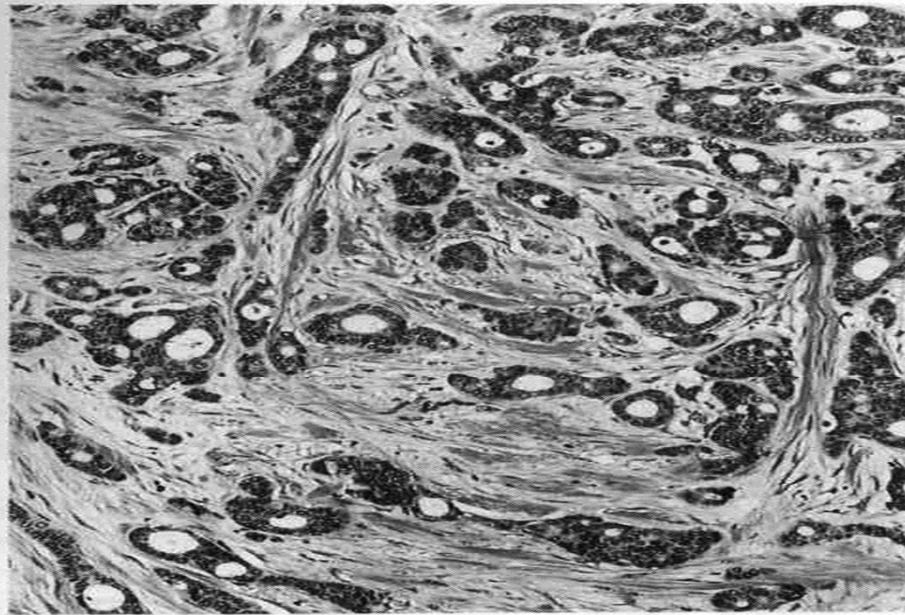


Figure 247
HISTOLOGIC GRADE
Well-differentiated pattern retains a tendency to form
tubules and glands.

INVASIVE LOBULAR CARCINOMA

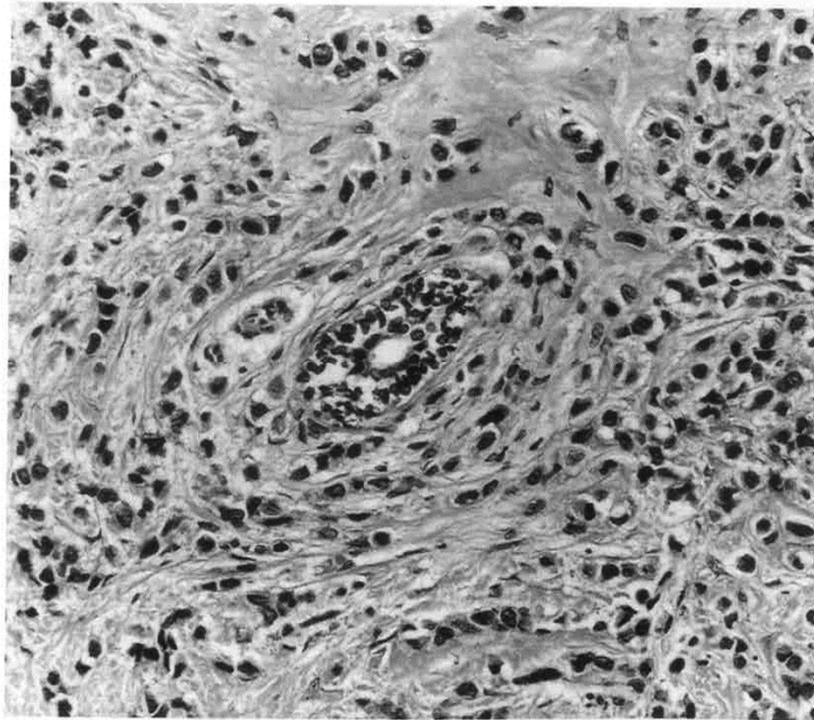


Figure 259
INVASIVE LOBULAR
CARCINOMA
Tumor cells with "classic" pattern ar-
ranged around duct in "bull's eye" fashion.

STAGING (TNM)

TNM- T

➤ T_x

➤ T_0

➤ T_{IS}

1) DCIS

2) LCIS

3) PAGETS

T1 - 2 CM. OR LESS

T1 - MIC 0.1 CM. OR LESS

T1a - 0.1 to 0.5 Cm.

T1b - 0.5 to 1.0 Cm.

T1c - 1.0 to 2.0 Cm.

T2 - 2 TO 5 CM

T3 - MORE THAN 5 CM.

T4 -

T4a - EXTENSION TO CHEST WALL

T4b - EXTENSION TO SKIN

T4c - BOTH T4a AND T4b

T4d - INFLAMMATORY CARCINOMA

TNM - N

N ₁		1 to 3 NODES +VE [AXILLARY OR INT. MAMMARY]
	N _{1a}	MICROMETS 0.2 TO 2 mm
	N _{1a}	1 TO 3 AXILLARY NODES
	N _{1b}	METS IN INT. MAMMARY NODES WITHOUT AXILLARY NODES
	N _{1c}	BOTH OF ABOVE

N ₂		4 to 9 AXILLARY NODES
	N _{2a}	ONE TUMOR DEPOSIT MORE THAN 2 mm.
	N _{2b}	INT. MAMMARY NODE METS. WITHOUT AXILLARY NODES

PN₃-10 OR MORE AXILLARY NODES

N _{3a}	10 OR MORE NODES WITH ONE DEPOSIT LARGER THAN 2 MM OR METS. TO INFRACLAVICULAR NODES.
N _{3B}	IPSILATERAL INT. MAMMARY NODES WITH AXILLARY NODES [1 TO 3]
N _{3C}	METS IN IPSILATERAL SUPRACLAVICULAR NODES.

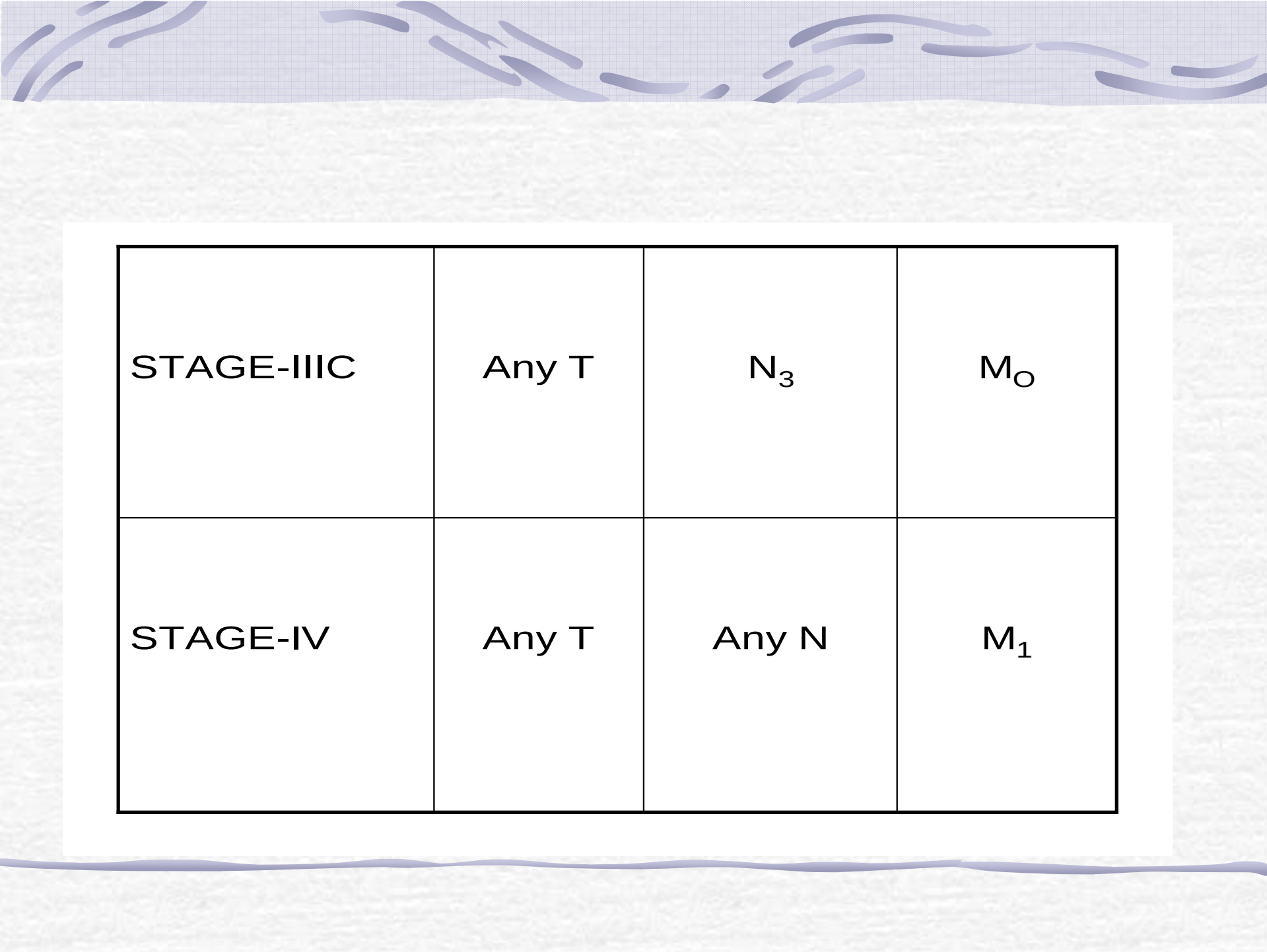
TNM - M

M_x	NOT ASSESSED
M_0	NO METS. TO DISTANT ORGANS
M_1	METS. TO DISTANT ORGANS

STAGE

STAGE : 0	T_{is}	N_0	M_0
STAGE:I	T_1	N_0	M_0
STAGE -IIA	T_1	N_0	M_0
	T_1	N_0	M_0
	T_2	N_0	M_0
STAGE -IIB	T_3	N_0	M_0

STAGE : IIIA	T_0	N_2	M_0
	T_1	N_2	M_0
	T_2	N_2	M_0
	T_3	N_1/N_2	M_0
STAGE- IIIB:	T_4	N_0	M_0
	T_4	N_0	M_0
	T_4	N_2	M_0



STAGE-IIIC	Any T	N_3	M_O
STAGE-IV	Any T	Any N	M_1

PROGNOSTIC PARAMETER

1) GRADE ,Modified Bloom – Recharadson Score System

- Score - 3 - 5 (Grade – 1)
- 6 - 7 (Grade – 2)
- 8 - 9 (Grade – 3)

2) Invasiveness of tumor

In situ carcinoma have excellent prognosis

3) Pathological Staging

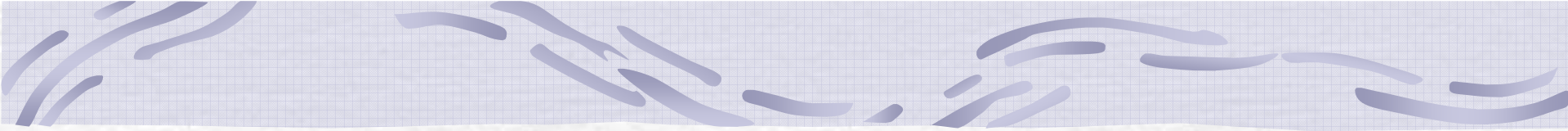
TNM

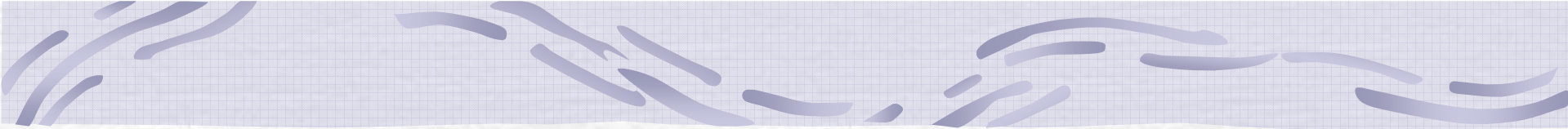
Minimum breast carcinoma (1 cm or less) has excellent prognosis

4) Site

Medially located disease has increased chances of metastasis & early death

5) Tumor Types

- 
- 6) Patients age
50yrs & more
and less than 35 yrs of age have worse
prognosis
 - 7) Pregnancy associated disease
Worse prognosis
 - 8) Early diagnosis or Asymptomatic
disease
 - 9) Margins , Necrosis , Stromal reaction
- 

- 
- 10) Microvessel density
 - 11) ER/PR Status
 - 12) HER-2 Neu
 - 13) Vimentin Positivity
 - 14) P 53, BCL 2
 - 15) Nipple / Skin Invasion
 - 16) Lymphatic / Vascular Invasion
 - 17) DNA Ploidy, Cell Proliferation Index,
Cyclin – D
 - 18) Axillary Nodes, Int. Mammary Nodes
- 



Thank you