DCIS
&
LCIS

Def - malignant appearing ductal epithelial cells without invasion of basement membrane

DCIS

Image
- Calcific
- Non calcific

Clinical
- Palpable lump
- No lump.

Pathology
- Comedo
- Non Comedo
  - papillary
  - micropapillary
  - solid
  - cribriform

→ Role of MRI in DCIS

- High grade DCIS - better sensitivity
- clinico - Radio discordance
- High risk pts
- Dense breast
- Non calcific DCIS
- Planning Oncoplasty

NOT MANDATORY

- Low risk DCIS

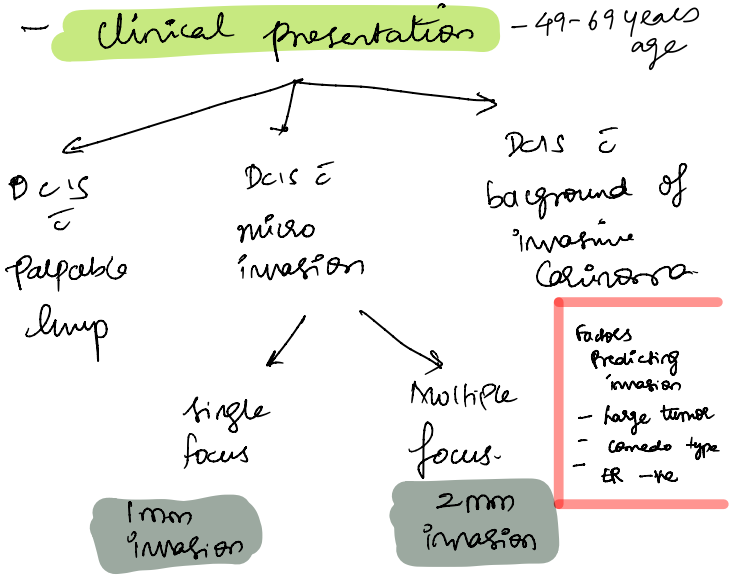
Observation vs standard therapy

trials

- LORIS
- LORAD
- COMET

Table 2 Key clinical trials evaluating active surveillance and biological risk stratification in DCIS

Study/Trial	Population	Management strategy	Key findings
COMET	Low-risk, hormone receptor-positive DCIS	Active surveillance *vs.* guideline-concordant standard therapy	Non-inferior short-term invasive cancer rates; quality-of-life advantages under evaluation
LORIS	Screen-detected low- or intermediate-grade DCIS	Surgery *vs.* active surveillance	Approximately 20% upgrade to invasive carcinoma at surgical excision
LORD	Low-grade (grade I–II) DCIS	Active surveillance	Feasibility demonstrated; long-term oncologic safety pending
ECOG-ACRIN E5194/Ontario cohort	Selected DCIS treated with excision alone	Genomic risk stratification	DCIS score™ predicts both invasive and *in situ* recurrence



→ Extent of surgery in DCIS

Feature	Score 1	Score 2	Score 3
Size (mm)	≤15	16–40	>40
Margins (mm)	≥10	1–9	<1
Grade and necrosis	Low or intermediate without necrosis	Low or intermediate with necrosis	High grade with/without necrosis
Age (years)	>60	40–60	<40
	Low score (4–6)	**Intermediate (7–9)**	**High (10–12)**
% patients	32.6%	56.7%	10.8%
Treatment recommendation	Wide-local excision (WLE)	WLE + radiotherapy (RT)	Mastectomy
10 year recurrence-free survival[a]	97%	73%	34%
10 year breast cancer-specific survival	100%	98%	98%

[a]*After WLE ± RT, mastectomy excluded (40).*

USC Van Nuys prognostic index

→ Margin Recommendation in DCIS

- 2mm clear margins, even if associated c IDC

If, one margin close
No EIC
Low grade
Recieving adj. RT

If YES To all,
No need to
revise the margin

→ Management of axilla in DCIS

Role of SLNB:

- In all pts preferring mastectomy
- In BCS
  - Intermediate / High Grade DCIS
  - Age < 55
  - Associated palpable lump
  - Lesion > 25 mm

★ SLNB can be performed after lumpectomy if final HPE reveals invasive cancer.

→ **Adjuvant therapies in DCIS**

① **Radiation**

- NSABP B-17
- Swedish DCIS trial

★ Van Nuys score > 7 → RT

- ↓ Ipsilateral invasive disease
  ↓ Ipsilateral DCIS

No effect on c/l Breast cancer

- following mastectomy → No benefit

★ **APBI in DCIS**

In low risk DCIS - RTOG 9804

- Size < 2.5 cm
- margin > 3 mm
- low / intermediate grade
- Screen detected DCIS

— ② Hormone therapy

— NSABP - B 24

Tamoxifen Reduced [I/L DCIS ; C/L DCIS]

No ↓ in I/L | C/L Invasive Cancer.

But trend toward it.

— NSABP - B 35

- Tamoxifen vs AI in ER +ve Post menopausal DCIS
- No difference

* Predictors for Risk of recurrence in DCIS :

1. oncotype Dx DCIS Score
   - on formalin fixed paraffin embedded (FFPE)
   - 10 yr Risk of local recurrence after BCS alone

2. DCIS ion RT, Prelude Dx
   - on FFPE blocks
   - 10 yr risk of LR after Sx alone and Sx + RT.

- Chemotherapy :
  - for multifocal DCIS
  - Invasive component

- Targetted Her 2 therapy
  - No role in pure DCIS at present
  - HER-2 - prognostic factor
    - predictor of Response to RT
  - Given in DCIS c invasive component > 5 mm

→ Receptors and molecular analysis in Breast Cancer:

* Pathology of LCIS:

- LCIS → alteration in lobular cytology
- Atypical lobular hyperplasia (ALH)

→ **Lobular neoplasia (LN) (ALH + LCIS)**

proliferation of loosely cohesive cells in Terminal duct-lobular unit with / without Pagetoid involvement of terminal ducts.

- LN:
  - incidence in breast Bx → 0.5 - 4 %
  - multifocal
  - Bilateral
  - **Risk of invasive carcinoma** → ipsilateral breast = 15 % } @ 10 years follow up.
    Contralateral breast = 9.3 %
    Risk Per year = 1-2 % per year
    Lifetime risk = 30 – 40 %
    RR = 6.9 – 11

    ↓
    Subsequent cancers are often invasive ductal carcinoma than lobular.

LCIS

Classical	Both	Pleomorphic
ER/PR +ve Her -ve Lack E-cadherin	– loss of 16q – Gain of 1q – mutations in CDH1 PIK3CA CBFB Genes	ER/PR +ve Her 2 -ve Lack E-cadherin Positive IHC for Gross cystic disease fluid protein-15.

– microcalcification ± central Necrosis.
difficult to differentiate from DCIS on mammo.

– Management of LCIS

* Role of excision Bx in LCIS → only in discordance btw image and patholology.
  ↓
  invasive cancer in 25–60 % cases.

* LCIS marker of proliferation
  - Surveillance – most preferred
  - Chemoprevention – Antiestrogen (similar benefits as general population)
  - B/L prophylactic mastectomy → Reduce risk by 90 %.

– Treatment by excision
- classic LCIS – No margin recommendation.
  – No adjuvant RT.
- pleomorphic LCIS – margin negative excision.
  – Role of adjuvant RT controversial