Breast Cancer — Ductal Carcinoma in Situ (DCIS)

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**DIAGNOSIS EVALUATION**

- Bilateral diagnostic mammography
- Pathology review
- Consider ultrasound of affected breast for mammographic findings other than clustered microcalcifications alone
- Genetic testing and counseling as indicated
- Lifestyle risk assessment

**LOCAL TREATMENT**

Not a breast conservation candidate or patient choice

- Total mastectomy, with or without sentinel node dissection, with or without reconstruction
- Invasive disease?

**SYSTEMIC TREATMENT**

- For patients who have had unilateral mastectomy, see Breast Cancer — Risk Reduction Therapy algorithm for risk reduction of a contralateral primary breast cancer
  - Tamoxifen
  - Aromatase inhibitors (AI)
  -Raloxifene
  - For patients who have had bilateral mastectomies, there is no indication for risk reduction therapy

**SURVEILLANCE/FOLLOW-UP**

- Physical exam with clinical breast exam annually
- Diagnostic mammography annually
- Annual gynecologic exam, if receiving tamoxifen
- Assess bone health (see Breast Cancer Survivorship: Bone Health algorithm)
- Encourage age appropriate cancer and general health guidelines
- Educate, screen and refer for lymphedema management as needed

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1 Pathology review to include:
- Tumor size
- Margin status
- Lymph node status if lymph node surgery performed
- Nuclear grade
- Histologic type/necrosis
- Estrogen receptor (ER)/progesterone receptor (PR) status, preferably on the surgical specimen (unless patient is undergoing bilateral mastectomy)

2 See Genetic Counseling algorithm

3 See Physical Activity, Nutrition, and Tobacco Cessation algorithms

4 Candidates for breast conservation therapy:
- Tumor to breast size ratio allows for acceptable cosmetic result
- Attempt 2 mm margins
- No evidence of diffuse microcalcifications on mammography
- No contraindication to radiation therapy

5 DCIS lymph node evaluation not recommended unless patient having total mastectomy which would preclude mapping at a later date if invasive disease noted on final pathology

6 Contralateral risk-reducing mastectomy may be considered in patients with a high-risk for future breast malignancy (e.g., BRCA mutation carrier, strong family history, history of chest wall radiation)

7 Tamoxifen is the primary choice for premenopausal patients, unless concerns for thromboembolism. Starting dose of tamoxifen is 20 mg by mouth once daily; may reduce to 5 mg once daily if needed for patient tolerance.

8 Off-label (Not FDA approved)

9 Limited data in the use of exemestane

10 Lower risk of uterine cancer but less long-term benefit

11 Routine breast imaging is not indicated after bilateral mastectomies

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Note: Consider Clinical Trials as treatment options for eligible patients.
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**DIAGNOSIS EVALUATION**

- Consider hypofractionation whole breast schedules for all whole breast patients, regardless of age
  - If adequately low risk (non-palpable, extent of tumor < 2.5 cm, grade 1-2, adequate margins), consider discussing risks and benefits of omission of radiation therapy or accelerated partial breast irradiation (APBI)
  - Consider genomic assays to assess personal risk of recurrence and radiation benefit
  - Strongly consider a tumor bed boost in patients receiving adjuvant radiation therapy

**LOCAL TREATMENT**

- **Positive margins:**
  - Re-excite or
  - Total mastectomy, with or without sentinel node dissection, with or without reconstruction

**SYSTEMIC TREATMENT**

- Tamoxifen is the primary choice for premenopausal patients
- Contralateral risk reducing mastectomy may be considered in patients with a high-risk for future breast malignancy (e.g., BRCA mutation carrier, strong family history, history of chest wall radiation)
- Tamoxifen is the primary choice for premenopausal patients, unless concerns for thromboembolism. Starting dose of tamoxifen is 20 mg by mouth once daily; may reduce to 5 mg once daily if needed for patient tolerance.
- Consider genomic assays to assess personal risk of recurrence and radiation benefit
- Consider hypofractionation whole breast schedules for all whole breast patients, regardless of age

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1. Candidates for breast conservation therapy:
   - Tumor to breast size ratio allows for acceptable cosmetic result
   - No evidence of diffuse microcalcifications on mammography
   - No contraindication to radiation therapy

2. Negative net margins:
   - If < 2 mm negative margins and planned radiation therapy, multidisciplinary planning to consider need to re-excite and consider radiation therapy boost 14-16 Gy as an alternative to re-excision

3. 38.5 Gy twice daily in 10 fractions is supported by phase III data for DCIS

4. DCIS lymph node evaluation not recommended unless patient having total mastectomy which would preclude mapping at a later date if invasive disease noted on final pathology

5. Contralateral risk reducing mastectomy may be considered in patients with a high-risk for future breast malignancy (e.g., BRCA mutation carrier, strong family history, history of chest wall radiation)

6. Tamoxifen is the primary choice for premenopausal patients, unless concerns for thromboembolism. Starting dose of tamoxifen is 20 mg by mouth once daily; may reduce to 5 mg once daily if needed for patient tolerance.

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**SURVEILLANCE/ FOLLOW-UP**

- Physical exam with clinical breast exam annually
- Diagnostic mammography 6-12 months after radiation therapy, then annually
- Annual gynecologic exam, if receiving tamoxifen
- Assess bone health (see Breast Cancer Survivorship: Bone Health algorithm)
- Encourage age appropriate cancer and general health guidelines
- Educate, screen and refer for lymphedema management as needed

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Note: Consider Clinical Trials as treatment options for eligible patients.

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SUGGESTED READINGS


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SUGGESTED READINGS - continued


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