

Commentaire

Clinical practice guidelines for the care and treatment of breast cancer: the management of ductal carcinoma in situ (summary of the 2001 update)

Ivo Olivotto, Mark Levine, for the Steering Committee on Clinical Practice Guidelines for the Care and Treatment of Breast Cancer

This article provides a summary of changes made by Health Canada's Steering Committee on Clinical Practice Guidelines for the Care and Treatment of Breast Cancer to the article "Clinical practice guidelines for the care and treatment of breast cancer: 5. The management of ductal carcinoma in situ (DCIS)," originally published in 1998¹ (the 2001 update can be found online at www.cma.ca/cmaj/vol-165/issue-7/breastcpg/guideline5rev.htm). Although there are not many changes to the guideline, new studies have provided more evidence to support the original recommendations.

DCIS of the breast is a proliferation of malignant-appearing cells of the ducts and terminal lobular units of the breast that have not breached the ductal basement membrane. Since more women are having screening mammography, DCIS is being diagnosed more frequently. In 1996, over 200 000 Canadian women aged 50–69 participated in 7 provincial screening programs. Of the 991 cancers detected, 171 were DCIS (17%, or 0.8 cases per 1000 women screened).² DCIS can be considered a precursor of invasive breast cancer and, if left untreated, can develop into invasive disease in up to 35% of cases within 10 years.

Again the steering committee emphasizes the importance of careful surgical removal of the area of DCIS and attention to meticulous pathological processing and reporting.³ The most clinically useful factors in terms of predicting local recurrence of the DCIS and progression to invasive cancer are nuclear grade, presence of necrosis, involvement of surgical margins and lesion size.

The original guideline recommended mastectomy, breast-conserving surgery (BCS) plus radiotherapy or BCS alone as treatment options for DCIS, and this recommendation has not changed substantially. The use of breast irradiation after BCS was supported by the results of 1 randomized trial in the 1998 guideline.⁴ A report has since been published of a second randomized trial, in which the European Organisation for Research and Treatment of Cancer randomly assigned 1010 women with DCIS to either BCS or BCS plus breast irradiation.⁵ At a median follow-up of 4 years, the rate of local recurrence was significantly lower in the group treated by BCS plus radiotherapy than in the group treated by BCS alone (9% v. 16%, $p = 0.005$). The survival rate was 99% in both groups. A large retrospective study has emphasized the importance of

ensuring that there is a wide rim of normal tissue around the excised tumour if there is consideration that a woman treated with BCS might not have radiotherapy.⁶ The steering committee feels that it is difficult to identify patients at such a low risk of breast cancer recurrence that radiotherapy could be omitted after BCS even though in such women the risk reduction in absolute terms associated with radiotherapy may be small. The 1998 guideline stated that "omission of radiotherapy may be considered when lesions are small and low grade, and when pathological assessment shows clear margins." The updated recommendation (Table 1) states that "BCS should usually be followed by radiotherapy. Patients with a sufficiently low risk of local recurrence with BCS alone are difficult to identify. However, BCS alone may be considered after a careful discussion with the patient, if detailed pathological assessment confirms that the lesion is small and does not have high-grade nuclei or comedo-type necrosis and the surgical margins are clear of disease. In addition, in such circumstances the surgical excision should be cosmetically acceptable."

In 1998 the steering committee concluded that evidence was not available to support the use of tamoxifen in the treatment of women with DCIS. Since then, the results were published of the National Surgical Adjuvant Breast Project B-24 trial, in which 1804 women with DCIS who received BCS plus radiotherapy were randomly assigned to receive tamoxifen or placebo.⁷ At 5 years the incidence of invasive breast cancer was significantly lower in the tamoxifen group than in the placebo group (4.1% v. 7.2%, $p = 0.004$); the corresponding incidence rates of recurrent DCIS were 4.2% and 6.2% ($p = 0.08$). Tamoxifen can be associated with side effects (see guideline 12, on the chemoprevention of breast cancer⁸). The updated recommendation for DCIS states that "the role of tamoxifen in the management of patients with DCIS continues to evolve. The potential benefits and risks should be discussed with patients."

The patient version of these guidelines has also been updated and can be found online at www.cma.ca/cmaj/vol-165/issue-7/breastcpg/guideline5revpt.htm.

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Table 1: Updated recommendations from the clinical practice guideline for the care and treatment of breast cancer: the management of ductal carcinoma in situ (DCIS)

Diagnosis and pathological assessment

- The first step in the diagnosis of DCIS, after history-taking and clinical examination, is a complete mammographic work-up.
- Once DCIS is suspected, either image-guided core biopsy or open surgical biopsy must be carried out.
- At surgical excision, the suspect area should be removed in one piece and a specimen radiograph obtained.
- The pathology report should address those features that bear on treatment choice, including as a minimum tumour size, morphology and grade, presence of necrosis, and width of margins.
- To obtain sufficient pathology information for treatment planning, attention should be paid to tissue processing and analysis.
- The specimen should, whenever possible, be reviewed by a pathologist experienced in breast disease.

Management

- Treatment options for DCIS are mastectomy, breast-conserving surgery (BCS) plus radiotherapy or BCS alone. The treatment should aim to achieve a high degree of local control. The optimal treatment for an individual woman should take into consideration the extent and type of disease, the ability of a cosmetically acceptable excision to achieve clear margins, and the woman's preference for breast conservation or avoidance of further treatment or breast cancer recurrence risk. The choice of local therapy does not significantly affect survival if local control is achieved.
- Compared with BCS, mastectomy is associated with more acute surgical morbidity, including pain, occasional delayed wound healing and seroma collection. In addition, the loss of the breast can have a profound and long-lasting psychosocial effect.
- Patients with DCIS treated by BCS should have a wide excision to remove all mammographically and pathologically evident DCIS. Mammographic imaging of the involved breast is required if the

radiograph of the specimen does not clearly show all microcalcifications.

- The risk of local recurrence is greater after BCS than after mastectomy. This risk can be reduced, but not eliminated, by patient selection and the use of adjuvant radiotherapy.
- BCS should usually be followed by radiotherapy. Patients with a sufficiently low risk of local recurrence with BCS alone are difficult to identify. However, BCS alone may be considered after a careful discussion with the patient, if detailed pathological assessment confirms that the lesion is small and does not have high-grade nuclei or comedo-type necrosis and the surgical margins are clear of disease. In addition, in such circumstances the surgical excision should be cosmetically acceptable.
- Patients should be informed of the role of radiotherapy, its side effects and the associated logistic requirements before they are expected to make the decision for BCS or mastectomy.
- Mastectomy is an option for all women with DCIS. Mastectomy should be recommended when lesions are so large or diffuse that they cannot be completely removed without causing an unacceptable cosmetic effect or when there is persistent margin involvement after 2 or more attempts at excision. If mastectomy is undertaken, breast reconstruction is an option.
- Mastectomy should not be followed by adjuvant local radiotherapy or systemic therapy.
- Bilateral mastectomy is not normally indicated for patients with unilateral DCIS.
- Axillary surgery, whether a full or limited procedure, should not be performed in women with DCIS.
- The role of tamoxifen in the management of patients with DCIS continues to evolve. The potential benefits and risks should be discussed with patients.
- Patients should be offered participation in clinical trials whenever possible.

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Dr. Olivotto and Dr. Levine contributed equally to the writing and revising of this commentary.

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