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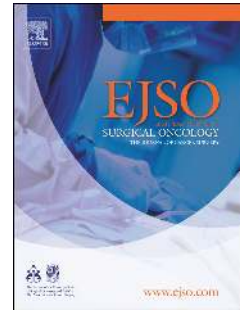
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FOLLOW-UP FOR SCREEN-DETECTED DUCTAL CARCINOMA IN SITU: RESULTS OF A SURVEY OF UK CENTRES PARTICIPATING IN THE SLOANE PROJECT

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ABSTRACT

Aims: To investigate the variations in follow-up practice for screen-detected ductal carcinoma in situ (DCIS) in the UK.

Methods: A questionnaire enquiring about follow-up practice and the perceived value of clinical follow-up after surgery for screen-detected ductal carcinoma in situ (DCIS) was sent to the 74 UK screening centres participating in the Sloane Project.

Results: Responses were received from 66 hospitals serving 54 screening centres. These demonstrate wide variations in practice. Clinical follow-up duration ranges from 1 year to indefinite, with the frequency of visits from three-monthly to annually. Formal mammographic follow-up duration ranges from none to indefinite. Mammographic frequency ranges from 1 to 2 years. Follow-up varies according to factors such as size and grade of disease and margin status in 23 units and according to whether adjuvant therapy is given in 23. Seven hospitals perform mammography of reconstructed breasts. Thirty-one centres consider clinical follow-up of DCIS to be of value or limited value whereas 28 consider it to be of little or no value.

Conclusions: There is no consensus with regard to the duration and frequency of follow-up for screen-detected DCIS, the contribution of predictive and treatment factors, the use of mammography of the reconstructed breast or the perceived value of clinical follow-up. Published guidelines show no consensus. Multidisciplinary teams involved in the care of women with screen-detected non-invasive cancer should contribute to audits such as the Sloane Project in order to determine the most effective and efficient ways to treat and follow up these patients.

KEYWORDS

Ductal Carcinoma In Situ

DCIS

Mammography

INTRODUCTION

The Sloane Project is a multicentre UK audit of screen-detected non-invasive breast cancer [1]. It is a prospective registrational audit which entails the collection of radiology, pathology, treatment and follow-up data for non-invasive screen-detected breast cancer and atypias. Although mostly directed towards the study of ductal carcinoma in situ (DCIS), cases of lobular in situ neoplasia (LISN - lobular carcinoma in situ and atypical lobular hyperplasia) and atypical ductal hyperplasia (ADH) are also collected. All 95 screening units in the UK have been invited to participate in the Sloane Project, and currently 74 are contributing patients. Each participating unit has a named 'Sloane Contact' who is responsible for co-ordinating the project at a local level. Over 5600 patients have been registered to date, making the Sloane Project the largest study of DCIS worldwide.

Despite a large body of literature, there remain many uncertainties about the diagnosis and management of DCIS. These include questions about the optimum follow-up strategy for women with screen-detected DCIS, including the roles of clinical examination and mammography, and the required duration of follow up. The present study was designed to investigate the variations in clinical and mammographic follow-up practice among the UK breast screening centres contributing to the Sloane Project, and in particular to determine whether a consensus exists upon which to base follow-up recommendations in the absence of clear research evidence.

PATIENTS AND METHODS

Questionnaires were devised by the Sloane Project Steering Group and sent to the Sloane Project contacts at the 74 participating UK breast screening centres (Appendix 1). These included questions about the type of clinic the women attend for follow-up; the frequency and duration of clinical and mammographic follow-up; whether all women receive the same follow-up, and if not, the reasons for the variations; and whether mammography of reconstructed breasts is performed. In addition, the centres were asked to state whether they consider clinical follow-up of DCIS to be of value.

RESULTS

Completed questionnaires were received from 66 hospitals serving 54 of the 74 breast screening centres participating in the Sloane Project. Not all questions were answered by every hospital. Unanswered questions and those answered as 'not known' are included in the calculation of percentages.

Location/mode of follow-up

Sixty-two hospitals follow women up in a surgical clinic and 26 in an oncology clinic. Twenty-seven follow women up in either or both of these or, in the cases of one hospital, in a joint clinic. Four hospitals have nurse-led follow up clinics, in two commencing in the first year after surgery and in the other two commencing 3 years after surgery. Forty-four hospitals have a mammographic surveillance programme.

Clinical and imaging follow-up protocols

Sixty-two hospitals state that they have a protocol for follow-up of DCIS, 38 have a protocol for LISN and 40 have a protocol for ADH.

Duration and frequency of follow-up

Table 1 summarises the most commonly reported duration and frequency of follow-up (both clinical examination and mammography) for non-invasive breast cancers treated by conservation surgery or mastectomy. For cases treated with conservation surgery, the duration of follow-up by clinical examination ranges from 1 year to indefinite, with the most common response being 5 years. For mammographic follow-up (excluding any routine screening mammograms that might be performed within the NHS Breast Screening Programme), the duration of follow-up ranges from two years to indefinite, with the most common response being 10 years. For cases treated with mastectomy, the duration of follow-up ranges from zero to indefinite for clinical examination and mammography, with the most common duration for the former being 5 years and for the latter 10 years.

The frequency with which women are followed up also varies widely between hospitals. In many centres the reported frequency of clinical examination and mammography vary according to the time from surgery, these generally being more intensive in the early post-operative years. For cases treated with conservation surgery, the frequency of follow-up by clinical examination ranges from 3-monthly (for the first year) to yearly. Twelve different frequencies were reported, the most commonly reported frequency being annual. The number of clinic attendances a woman can expect to make in the 10 years after surgery varies from 1 to 15, depending on the hospital. A similar picture emerged for cases treated with mastectomy, where 14 different follow up frequencies were reported, the most common response again being annual.

Ten different frequencies of mammographic follow-up were reported for women treated with conservation surgery and 11 different frequencies for women treated with mastectomy. In both cases the most common response was annual. Biennial mammography is performed in six centres after conservation surgery and in 18 centres after mastectomy.

Variations in follow up between patients

In 23 hospitals follow-up is varied according to predictive factors (e.g. cytonuclear grade, lesion size, margins) and/or patient age. Twenty-three hospitals vary follow-up according to adjuvant therapy and several hospitals stated that patients who have received radiotherapy are followed up in oncology clinics rather than surgical clinics.

Value of routine clinical follow-up of women

Thirty-one hospitals considered clinical follow up to be of at least some value whereas 28 hospitals considered it to be of little or no value.

Mammography after breast reconstruction

Seven hospitals replied that they perform mammography of the affected side after latissimus dorsi, TRAM or similar reconstructions.

DISCUSSION**Study design**

Although there was a relatively good response rate to the questionnaire, this survey inevitably gives an incomplete picture of the various follow-up policies for DCIS in use throughout the UK. The screening centres participating in the Sloane Project were specifically targeted as it was felt that they were more likely to respond to the questionnaire than non-participating centres. Overall, responses were received from units serving 54 of the approximately 95 UK breast screening units. Even with these limitations, the wide variation in follow-up practice between responding units is clear evidence of a lack of consensus.

Existing evidence and guidance

Despite the large number of cases of breast cancer treated worldwide each year, there are few high quality studies of follow-up, and the optimum method, frequency and duration of follow-up has yet to be determined. This paucity of evidence (or even agreement) has not prevented a number of professional bodies in the UK [2, 3, 4, 5], Europe [6, 7], North America [8, 9, 10] and Australasia [11] from publishing guidelines on breast cancer follow-up. Most of these recommend clinical follow-up for at least the first five years after primary treatment. Mammographic surveillance every one to two years is recommended by most UK and European guidelines. Recently published guidance from the UK National Institute for Health and Clinical Excellence (NICE) recommends annual follow-up mammography for at least five years [5]. North American guidelines also advocate annual mammography. Mammography of reconstructed breasts is not specifically mentioned in most of the published guidance, although NICE states that mammography of the ipsilateral soft tissues after mastectomy should not be offered.

There are increasing numbers of women with screen-detected non-invasive breast disease and no evidence base to decide how they should best be followed up. Such follow-up guidance for DCIS as exists is limited. The Australian National Breast Cancer Centre [12] recommends annual clinical examination and mammography, the latter to continue for an indefinite period. The American College of Radiology, the American College of Surgeons, the College of American Pathology and the Society of Surgical Oncology in their joint guidelines on DCIS [13] recommend clinical examination every six months for the first five years, then annually. They advocate mammography in the early post-operative period to confirm complete excision of all suspicious microcalcifications, followed by a baseline mammogram at 6 to 12 months, and then mammography at least annually. The great majority of local recurrences following conservation surgery for DCIS are detectable by mammography at a time when clinical examination is usually normal [14, 15].

Variations in practice

The present UK survey demonstrates wide variation in follow-up practice between individual centres, with a 15-fold variation in the number of clinic visits women make after surgery for DCIS. The use of surveillance mammography ranges from simply discharging women for routine three-yearly screening in the NHSBSP to annual hospital mammograms. These variations suggest that in some hospitals women are getting inadequate follow-up care and/or that in others valuable resources are being wasted in over-zealous and expensive follow-up.

Seven of the centres surveyed employ routine surveillance mammography of the affected breast following breast reconstruction, despite the absence of clear evidence or guidance to support its use.

CONCLUSION

Screen-detected DCIS should have an excellent prognosis if correctly managed. Failure to treat the disease adequately, or to detect recurrent disease in a timely manner, risks the development of invasive breast cancer with adverse consequences for the patient. This survey indicates that no consensus exists in the UK upon which to base recommendations for DCIS follow-up. It does, however, highlight the need for good quality research and audit data on follow-up in order to permit the establishment of the most efficient and cost-effective surveillance protocols. The Sloane Project, with its large number of registered cases of DCIS and ongoing collection of outcomes, is expected in the future to provide valuable data to inform the decision as to how best to follow-up the individual patient. All UK breast screening multidisciplinary teams are encouraged to contribute patients.

Conflict of interest

The authors state that they have no conflict of interest.

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ACCEPTED MANUSCRIPT

REFERENCES

1. The Sloane Project. <http://www.sloaneproject.co.uk>
2. Association of Breast Surgery @ BASO. Guidelines for the management of symptomatic breast disease. *Eur J Surg Oncol* 2005;**31**:S1–21.
3. Scottish Intercollegiate Guidelines Network (2005). Guideline 84: Management of breast cancer in women. www.sign.ac.uk/pdf/sign84.pdf
4. Royal College of Radiologists (2003). Guidance on Screening and Symptomatic Breast Imaging. www.rcr.ac.uk/publications.aspx?PageID=310&PublicationID=184
5. National Institute of Health and Clinical Excellence (2009). Early and locally advanced breast cancer: diagnosis and treatment. www.nice.org.uk/nicemedia/pdf/CG80FullGuideline.pdf
6. Rutgers EJT for the EUSOMA consensus group. Quality control in the locoregional treatment of breast cancer. *Eur J Cancer* 2001;**37**:447-53.
7. European Society for Medical Oncology. ESMO Minimum Clinical Recommendations for diagnosis, adjuvant treatment and follow-up of primary breast cancer. *Ann Oncol* 2005;**16** (Supplement 1): i7–i9.
8. National Comprehensive Cancer Network. Clinical practice guidelines in oncology: breast cancer. Version 2, 2008. www.nccn.org/professionals/physician_gls/PDF/breast.pdf
9. Temple LKF, Wang EEL, McLeod RS. Preventive health care, 1999 update: 3. Follow-up after breast cancer. *CMAJ* 1999;**161**:1001-8.
10. Khatcheressian JL, Wolff AC, Smith TJ et al. American Society of Clinical Oncology 2006 Update of the Breast Cancer Follow-Up and Management Guidelines in the Adjuvant Setting. *J Clin Oncol* 2006;**24**:5091-7.
11. Clinical practice guidelines for the management of early breast cancer, second edition. National Breast Cancer Centre, Camperdown, NSW, Australia, 2001.
12. The clinical management of ductal carcinoma in situ, lobular carcinoma in situ and atypical hyperplasia of the breast, first edition. National Breast Cancer Centre, Camperdown, NSW, Australia, 2003.
13. Standard for the Management of Ductal Carcinoma In Situ of the Breast (DCIS) Morrow M, Strom EA, Bassett LW et al. *CA Cancer J Clin* 2002;**52**:256-76.
14. Liberman L, Van Zee KJ, Dershaw DD, Morris EA, Abramson AF, Samli B. Mammographic features of local recurrence in women who have undergone breast-conserving therapy for ductal carcinoma in situ. *AJR Am J Roentgenol* 1997;**168**:489–93.
15. Pinsky RW, Rebner M, Pierce LJ et al. Recurrent cancer after breast-conserving surgery with radiation therapy for ductal carcinoma in situ: mammographic features, method of detection, and stage of recurrence. *AJR Am J Roentgenol* 2007;**189**:140–4.

APPENDIX 1

THE SLOANE PROJECT: FOLLOW UP QUESTIONNAIRE

The Sloane Project team is trying to set up a more robust follow up data collection system for Sloane Project follow up data, to reduce the burden on screening units with regard to collecting follow up data. In order to do this we thought it would be useful to find out what the follow up protocol for screen-detected DCIS, Lobular In Situ Neoplasia (LISN), and ADH is across the UK breast screening units.

Please can you therefore complete this follow up questionnaire, providing as much as information as possible.

Please indicate your Breast Screening Unit:

Section 1 This section asks for general information about your follow up protocol.

1) In your Unit, women with screen detected DCIS are followed up in (please tick all that apply):

- a) a surgical follow up clinic
- b) an oncology clinic
- c) a mammographic surveillance programme
- d) other

If "other", please explain (e.g. GP or nurse led clinic):

2) Do you have a clinical and imaging follow up protocol for women with screen detected DCIS (or other pathology who fulfil the entry requirements for the Sloane Project i.e. LISN, ADH) (please tick box)?

- a) DCIS
Yes No Don't Know
- b) LISN
Yes No Don't Know
- c) ADH
Yes No Don't Know

If "yes" to any of the above, please return a copy of the protocol with this form.

Section 2 This section asks questions about length and frequency of clinical and mammographic follow-up.

3) Conservation surgery (Wide Local Excision and its variants)

- a) For how many years do your patients have a clinical follow up?
- b) How frequently (i.e. at what interval(s))?
- c) How long do you follow up with mammography?
- d) How frequently (i.e. at what interval(s))?

4) Mastectomy +/- Immediate Reconstruction

- a) For how long do you follow up with a clinical examination?
- b) How frequently (i.e. at what interval(s))?
- c) How long do you follow up with mammography?
- d) How frequently (i.e. at what interval(s))?

5) Do all women receive the same follow up schedule?

Yes No

If the answer to Question 5 is "No" please confirm what would influence your follow up schedule: -

a) Prognostic factors (e.g. cytonuclear grade, lesion size, margins)

Yes No

If yes, please explain:-

b) Age of the patient

Yes No

If yes, please explain: -

c) Adjuvant therapy decisions?

Yes No

If yes, please explain:-

6) Do you vary the follow up according to whether the woman has received adjuvant treatment (endocrine therapy and/or radiotherapy)?

7) Do you consider routine clinical follow up of women who have been treated for DCIS to be of value?

8) Do you perform mammography of the reconstructed breast in women who have had a mastectomy and LD, TRAM, or similar reconstruction?

Yes No

If "Yes", please specify whether this is routine or only in selected cases?

9) Please provide any further information about your follow up procedures not already covered in the above questions.

TABLE 1

Mode of Follow Up	Clinical Examination					
	Conservation Surgery			Mastectomy		
		No.	%		No.	%
Duration	5 years	31	47	5 years	32	48
	3 years	10	15	3 years	10	15
				10 years	5	8
Frequency	annual	38	58	annual	35	53
	6-monthly for 1 or 2 years, then annual	6	9	6-monthly for 2 years, then annual	7	11
Mode of Follow Up	Mammography					
	Conservation Surgery			Mastectomy		
		No.	%		No.	%
Duration	10 years	28	42	10 years	29	44
	5 years	17	26	5 years	18	27
Frequency	annual	29	44	annual	23	35
	annual for 5 years, then 2-yearly	12	18	2-yearly	18	27
	2-yearly	6	9	annual for 5 years, then 2-yearly	5	8

The most commonly reported duration and frequency of follow-up (both clinical examination and mammography) for non-invasive breast cancers treated by conservation surgery or mastectomy.