International Cancer Screening Network
(ICSN)

ICSN DCIS Working Group

Protocol of the DCIS detection and management project

INDEX

Excel data collection forms:

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BACKGROUND
April 2007

1. Available data on breast cancer care in Europe

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1. Available data on breast cancer care in Europe

Notes for the NCI teleconference, May 14th 2007

Antonio Ponti, CPO, 16th April 2007

I have been asked to summarize available individual data on breast cancer care in Europe, for the purpose of exploring the possibility of joint investigation with NCI on comparing breast cancer management and care in Europe and the United States.

First, it must be recognized that it is not available at this time a Europe-wide population based system with characteristics similar to the US SEER-Medicare dataset. However, a number of datasets and projects do exist from which relevant information could be extracted. In agreement with Larry vonKarsa, I decided to concentrate for now, in this report, on data which is most readily available, being directly linked to projects originally co-financed within the European Breast Cancer Network and/or being related to projects of which I am responsible (datasets 2-5).

Please consider this description as a first attempt to find a common ground of investigation. Even before the teleconference we could be more detailed or more extensive as a result of receiving your comments to this draft. Also, it would be very useful for us to receive a description of the SEER-Medicare dataset and any other input you would consider appropriate.

1. An introduction to the QT database

It has been produced a Microsoft Access© individual records database and Audit system, named QT (Audit system on Quality of breast cancer Treatment). It can be freely downloaded at www.cpo.it/qt or at the EUSOMA website (www.eusoma.org). It is available in six languages (English, French, German, Italian, Spanish, Hungarian) and has users in several European countries. A web version of the database is also available, at this time in Italian only. Useful features of QT are that it is being kept updated with guidelines and the availability within the same package of data entry and data analysis facilities, ranging from free analysis with use of the main statistical procedures to the production of several standard reports. Data items included in QT are numerous (see a selection in the enclosed document **CoreQTitems.doc)**, serving different needs which are related not only to monitoring but also to patient care. However, the minimum data set necessary to calculate quality indicators is much more limited and is clearly identifiable by the user during data entry (different colour in the background). Quality indicators are described in http://www.qtweb.it/index.php?id=14&l=E . QT includes a section with screening history to allow its use for screening evaluation purposes, allowing the classification of population breast cancer cases in Never Invited, Never Attendees, Screen Detected, Interval. In addition to the monitoring of process indicators, the system allows data recording and analysis of long term follow up for recurrences and survival.

QT has been designed for and is being used by clinical Breast Units for monitoring diagnosis and treatment of breast lesions in symptomatic as well as asymptomatic women. The final statement of the first European Joint Breast Cancer Conference, in fact, states that quality assurance programs should be mandatory for all clinical Units treating breast cancer (1). The final report of the European Society of Mastology (EUSOMA) workshop in Leuven in May 1999 on "Breast Units: future standards and minimum requirements", states that performance figures on precisely defined quality objectives and outcome measures must be produced by Breast Units yearly (2). Currently EUSOMA is conducting a voluntary accreditation program for Breast Units where QT is employed as the model dataset (see brief description in paragraph 5 of this document).

The use in different settings (screening evaluators, clinicians, Cancer Registries in the framework of high resolution studies) in Europe of a common database on breast cancer, reflecting agreed guidelines and allowing benchmarking, can contribute to achieve a greater collaboration and understanding between these different areas of medicine and a better evaluation of quality of care and of screening impact.

2. Datasets available in QT format: the Italian annual survey on screen-detected cases

Within the Italian Breast Screening Network (GISMa) a quality assurance program on screen detected breast cancer care is on going since 1997 (3). Results of this activity are published yearly in the Reports of the National Centre for Screening Monitoring (4, available at http://www.osservatorionazionalescreening.it/eng/publications/publications.htm).Within this survey individual data are collected yearly on more than 50% of all screen detected operated lesions in Italy.

Individual data on diagnosis and treatment of screen detected cancers are recorded on QT by clinical staff to whom screen-detected cases are referred, in co-operation with screening organisation and evaluation Units. Local or, more commonly, regional programs report data, yearly, to the national co-ordination office at CPO-Piemonte, Turin, which performs data quality control and analysis of outcome measures. The definitions of performance indicators which are being monitored are from Italian and European (5,6,7) guidelines. In the time period 1997-2005 (2006 is not available yet) nearly 18,000 lesions (80% of which are invasive or in situ cancer) in women aged 50-69, treated by 100 surgical Units and detected by 40 screening programs in 10 Italian Regions have been documented in QT. To avoid selection bias, the protocol requires that participating programs aim at recording all screen-detected cases, including those operated by Units not related to the screening program or based in different geographical areas.

Data from this survey are rather detailed and complete as for pre and postoperative diagnosis and surgery on breast and axilla, while information on radiotherapy, chemotherapy and follow up is very often missing.

3. Datasets available in QT format: the project within the European Breast Cancer Network (EBCN) on assessment and treatment of screen-detected breast cancer

Ten programmes from seven European countries (Belgium, Germany with two programmes, Italy with three programmes, Luxembourg, Spain, United Kingdom, Hungary) agreed to participate in this study.

A questionnaire was designed to explore the procedures for the diagnostic assessment and treatment of breast lesions in different settings in Europe. All programmes filled in the questionnaire. The same questionnaire was also filled in by seventy-two screening centres from the United Kingdom (UK), which provided a useful comparison.

All centres were then invited to retrospectively collect individual data on “assessment episodes”, defined as the diagnostic work-up of a lesion following a positive screening test. All consecutive assessment episodes during a time period of about 1 year had to be recorded, and about 5000 records were entered in a modified version of QT (including negative assessment and not only operated lesions). Note that this particular dataset is not relevant, I think, for our discussion since it does not only include cancer cases and is rather specific to screening. However, within the same

project individual data have been also separately recorded on QT on series of consecutively diagnosed breast cancer cases. For this purpose, about 1500 invasive and in situ breast cancer cases have been recorded. They are all screen-detected in 2002-2003 in women aged 50-69. Similarly to the Italian screening dataset, information on radiotherapy and chemotherapy is not available.

Papers are being finalized on the results of this project.

4. Datasets available in QT format: population sample in Piedmont

A random sample has been drawn of all new invasive and in situ breast cancer cases (age: 50-69) operated among residents in the Piedmont Region (population: 4.5 million) in the years 2002 and 2004. Data have been extracted from clinical records and by record linkage with hospital and ambulatory care files. About 1200 sampled cases (about one third of them being screen-detected within the organized population breast screening program) have been recorded in QT.

Besides being population based, an advantage of this particular dataset is the availability of reliable information on mode of diagnosis (screening history), radiotherapy, chemotherapy and follow up.

Papers are being written on the results of this project.

5. Datasets available in QT format: the EUSOMA Network database

EUSOMA is conducting a voluntary accreditation program for Breast Units where QT is employed as the model dataset for validating Audit. Within this program 20 Breast Units in Germany and Switzerland have been visited so far, during 2005-2006. These 20 Hospitals use six different databases, one of which was QT. The remaining five have been validated and made compatible with QT through transfer files (http://www.qtweb.it/index.php?id=12&l=E). Data should be transferred yearly from these (and the future) accredited Units starting Spring 2007. No data are therefore available at this time yet.

6. Other datasets

- A survey with similar characteristic to the one described in paragraph 2, although based on a dataset of aggregated rather than individual data, is being conducted since the mid nineties within the United Kingdom NHS Breast Cancer Screening Programme. The most recent report concerns the years 2004-2005 and includes 14,000 cases. The report can be downloaded from http://www.cancerscreening.nhs.uk/breastscreen/publications/ba04-05.html

- In Italy Eugenio Paci (e.paci@cspo.it) is responsible of the Impact project, which includes some 40,000 incident breast cancer cases from 12 Italian Cancer Registries during 1998-2002. This particular dataset is population based and has information on screening history (obtained by linkage with population screening files). Compared to datasets 2-5 information on diagnosis and treatment is less detailed. A paper has been recently published on mastectomy rates: http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=17043685&query_hl=11&itool=pubmed_docsum

1. Cataliotti L., Costa A., Daly P.A. et al. Florence Statement on Breast Cancer, 1998. Forging the way ahead for more research on and better care in breast cancer. *Eur J Cancer* 1999, **35**, 14-15.

2. Blamey R., Blichert-Toft M., Cataliotti L. et al. Breast Units: Future Standards and Minimum Requirements. *Eur J Cancer*, 2000, **36,** 2288-2293.

3. Distante V., Mano M.P., Ponti A. Monitoring surgical treatment of screen-detected breast lesions in Italy. *Eur J Cancer* 2004, **40**, 1006-10012.

4. Ponti A., Mano M.P., Distante V. et al. Audit system on Quality of breast cancer diagnosis and Treatment (QT): results from the survey on screen detected lesions in Italy, 2004. In: Rosselli del Turco M., Zappa M. (eds), The National Centre for Screening Monitoring, Fourth Report, *Epidemiol Prev* 30 (1) 2006, supplement 3.

5. Perry N., Blichert-Toft M., Cataliotti L. et al. Quality Assurance in the Diagnosis of Breast Disease, *Eur J Cancer*, 2001, **37**, 159-172.

6. Rutgers E.J.T., Bartelink H., Blamey R. et al. Quality Control in Locoregional Treatment for Breast Cancer. *Eur J Cancer*, 2001, **37**, 447-453.

7. Perry N., Broeders M., de Wolf C., Tornberg S., Holland R., von Karsa L., eds. European Guidelines for Quality Assurance in Breast Cancer Screening and Diagnosis, 4th Edition. European Commission, Europe Against Cancer Program, Luxembourg, 2006.

2. Summary of U.S. activities on Quality of Breast Cancer Care:

2.1. Use of the SEER-Medicare Data to Assess the Quality of Breast Cancer Care

Background

The SEER-Medicare data resulted from the combination of two large population-based sources of data that provide detailed information about elderly persons with cancer in the United States. The data from the Surveillance, Epidemiology and End Results (SEER) program of cancer registries report clinical, demographic and cause of death information for persons with cancer. These data have been linked to health claims for persons who are Medicare eligible. Medicare claims included all covered health care services from the time of a person's Medicare eligibility until death. The comprehensive and longitudinal nature of the data make it a good resource for evaluating processes of care, such as the initial treatment of breast cancer. The SEER-Medicare database has data from 1973 – 2005 and over 396,654 breast cancer cases.

http://healthservices.cancer.gov/seermedicare/

Possible Quality Questions that can be addressed with the SEER-Medicare Data

Patterns of Care

- BCS vs. mastectomy
- RT following BCS
- Axillary node dissection for invasive; no dissection for DCIS
    - NHS standard is that 95% of invasive breast cancers should have axillary node dissection
- Number of nodes examined
    - NHS has as a quality objective a minimum of 4 axillary nodes for invasive breast cancer
- Referral to medical oncologist for those women for whom chemotherapy is clinically appropriate (complicated to assess as many of the elderly have health conditions that are contraindications or are of an advanced age so that the survival benefit would be small)
- Chemotherapy for those women who are appropriate candidates

Provider Evaluations

- Hospital and surgical volume as they relate to complications (see below)
- Surgeon characteristics (age, gender, specialty) related to patterns of care
- Surgeon characteristics (age, gender, specialty) related to complications

Complications of Treatment

- Rates of hospitalizations for complications following surgery
- Re-excision rates following BCS
    - NHS standard- 90% of women with a single lesion should have only one procedure. (We can't distinguish multifocal cases but can look at re-excision rates).

Treatment delay

- Time from biopsy to definitive surgery
    - NHS standard- 90% of women have surgery within 2 months of first assessment visit (We do not have info on first assessment visit but can look at time between last mammogram and bx as well as time between biopsy and cancer-directed surgery).

    - Time from surgery to initiation of adjuvant therapy (chemotherapy, RT)
- Relationship of treatment delays to cause-specific survival

Information that is not included in the SEER-Medicare Data

- Reason for or results of a mammogram
- Method of detecting breast cancer
- Type of biopsy may/may not be reliable- would need to evaluate this
- Results of a biopsy- benign/malignant; ER/PR status, HER2 results
- Margin status
- Recommendations from the physician/woman's decision re: treatment
- Oral medications such as Tamoxifen

2.2. Use of the POC Data to Assess the Quality of Breast Cancer Care

Background

The Patterns of Care (POC) studies provide important information on the receipt of cancer therapies that are not well documented in hospital records. The goals of the program are to evaluate the dissemination of state-of-the-art cancer therapy into community practice, disseminate these findings and work with professional organizations to develop educational opportunities to improve the use of state-of-the-art cancer therapy and quality of care in community practice. Each year NCI selects different cancer sites to be included in the POC studies and randomly samples cases from those ascertained by the SEER registries. Breast cancer cases were sampled in 1987-1991, 1995, 2000 and data collection is underway for cases diagnosed in 2005. These studies provide national population-based information on treatment dissemination into community practice, possible determinants of dissemination, and variations in therapy. This information is vital in developing educational programs designed to improve the quality of cancer care. The POC studies provide information that may decrease disparities in treatment and survival among different population groups. The POC database has data from 1989 – 2000 with 9,015 breast cancer cases.

POC Data that might address Quality of Care issues

<u>Patterns of Care</u>

- Surgical therapy: BCS with RT, BCS without RT, Mastectomy
- Lymph node dissection, sentinel, traditional
- Number of nodes examined
- Chemotherapy and hormonal therapy in patients who are appropriate
- Chemotherapy for those women who are appropriate candidates
- Partial breast irradiation (2005)
- Margin status

<u>Provider Evaluations</u>

- Hospital ownership
- Hospital bed size
- Approved Residency Training Program

<u>Treatment delay</u>

- Time from biopsy to definitive surgery
- Time from surgery to initiation of adjuvant therapy (chemotherapy, RT and hormonal)
- Relationship of treatment delays to cause-specific survival

Additional information available

- Method of detecting breast cancer (2000, 2005)
- Method of measurement (2000, 2005)
- Type of biopsy
- Re-excision
- ER/PR status, S-phase, HER2(2000,2005), Oncotype DX (2000, 2005) results
- Oophorectomy
- Sequence of therapies

2.3. Breast Cancer Surveillance Consortium

The Breast Cancer Surveillance Consortium is a research resource sponsored by the National Cancer Institute for studies designed to assess the delivery and quality of breast cancer screening as well as the biology of breast cancer. The development of new collaborations to achieve these ends is a key goal of the BCSC. The BCSC data are available to outside investigators for research purposes and this site provides detailed information regarding the specific variables and how collaborations may be developed.

The data include information at the individual level regarding demographics, breast symptoms, mammogram interpretations and cancer. Because the data is associated with individuals, maintaining patient and provider confidentiality is a primary concern of NCI. Therefore, the BCSC data are managed by the Statistical Coordinating Center of the BCSC. All personal identifiers for all patient and medical care providers have been removed from the data. Investigators are required to obtain approval of their idea and study site access in order to obtain the data. NCI will work with investigators requesting data files to balance their research needs with those of the individuals and institutions included in the data. The Statistical Coordinating Center (SCC) will do analyses if patient confidentiality is a concern. Currently, the BCSC database (1994-2005) has 6,000,000 mammographic examinations, 2,017,869 women, and 74,000 breast cancer cases.

Some sites also submit information regarding treatment that is collected by the SEER registry at their site. This data is extracted from hospital data for encounters during the first months of treatment. It is most complete for surgery but presents problems for chemotherapy since that may occur outside the audit window. The data typically includes:

Pathologic Variables

- Carcinoma pathology (as obtained in SEER registries)
- Type of procedure, reporting source, laterality
- Staging: size, histopathology, grade, tumor size, number of positive nodes, metastasis present (TNM), American Joint Committee on Cancer stage, extension, nodal involvement (number examined and positive), tumor sequence, estrogen and progesterone receptor status
- Therapy (data first initiated): surgery, radiation, chemotherapy, hormonal, biologic modification, no surgery reason

Follow-up status: date of last follow-up, vital status last follow-up, cause of death

Note: the following items pertain to future data resources

2.4. Use of the National Cancer Data Base (NCDB) to evaluate the quality of breast cancer care

The Cancer Care Quality Measurement Project (Canqual) is an interagency initiative involving the Centers for Medicare and Medicaid Services (CMS), the Agency for Health Research and Quality (AHRQ), and the Centers for Disease Control and Prevention (CDC) and the NCI to develop quality of care measures for cancer care than can be used in research, quality improvement, program policy, and surveillance. The primary objective of the project is to identify and refine existing quality of care measures that can be evaluated as voluntary consensus standards for cancer care quality measurement. One of the subject matter areas that the project is focusing on is breast cancer diagnosis and treatment.

NCI has contracted with the American College of Surgeons (ACoS) in 2006 to pilot test the reliability and validity of a subset of breast cancer care quality measures in breast cancer diagnosis and treatment, submitted by the American College of Surgeon's Commission on Cancer. These measures cover a broader continuum of care from diagnostic testing through surgery and adjuvant systemic therapy. Examples of the measures submitted by the college include the following:

- Breast conserving surgery is followed by radiation to the breast in women under age 70.
- Combination chemotherapy considered or administered within 8 weeks of definitive surgery for women with hormone receptor negative (ER-, PR-) breast cancer greater than one centimeter in greatest diameter.
- Tamoxifen or third generation aromatase inhibitor considered or administered to patients with hormone receptor positive (ER+, PR+) Stage 1 (tumor size <1 centimeter and N0) and Stage II/III (any tumor size and N+) disease.

The ACoS measures were reviewed by a technical expert panel and the project's National Steering Committee on their scientific validity, usability, and suitability for surveillance, quality improvement, or accountability. The Canqual Steering Committee found the measures suitable for surveillance and quality improvement, but recommended that the measures be returned to the College for further refinement and testing as accountability measures. The development of accountability measures is important to the federal partners because of their potential application in public reporting and pay-for-performance program initiatives.

Accountability measures are those that allow meaningful comparison across similar units of analysis. For the purposes of this contract, comparisons will be made among Commission on Cancer-approved (CoC) hospital-based cancer programs. This contract supported the testing of the ACoS measures in the 1,400 hospital-based cancer programs participating in the CoC's National Cancer Data Base (NCDB). This large sample enables a robust examination of the variation in the care measured by type of hospital, hospital location, and geographic region. The large samples sizes available in the NCDB support sensitivity analyses of the measures by patient factors not explicitly noted in the measure specifications, including for example, age, race/ethnicity, and co-morbidity status. Sensitivity analyses were performed on aspects of the measure specifications that were of concern to the Steering Committee, including, for example, whether the use of codes that allow as inclusion criteria whether it was unknown whether chemotherapy was administered if recommended. The College applied the specifications of the NQF quality measures to NCDB data, provided evidence of the validity of the proposed measures, and determined the surveillance or accountability status of each measure as applied to CoC-approved hospital-based cancer programs.

This first phase of a project involved the refinement and testing of the measures for scientific validity and reliability. This phase was completed in April 2006. A second phase of the project is currently underway to pilot test the measures through the development of on-line reporting tools for benchmarking care and reporting facility-specific performance for CoC approved hospital-based

cancer programs as well as other hospitals that might want to use these tools and measures. This second phase will be completed in the summer of 2007.

2.5. Developing new breast cancer quality of care measures for ambulatory oncology practice

NCI is participating in an initiative sponsored by the American Society of Clinical Oncology (ASCO) and American Society for Therapeutic Radiology and Oncology (ASTRO), and the American Medical Association Physician Consortium on Performance Improvement to develop an Oncology Work Group to review existing cancer quality of care measures and develop new measures suitable for use in office-based cancer specialty practice. One of the priority areas is breast cancer treatment. The measures will be designed to be suitable for reporting through existing billing systems by creating new Current Procedural Terminology-II or CMS "G codes" to supplement existing visit codes. The measures are intended to be used in the CMS physicians voluntary quality reporting system. The workgroup held its first meeting in March, 2006 and is developing a workplan to prioritize measures and complete the development within the next six to eight months.

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SYSTEMATIC LITERATURE REVIEW
May 2009

Search Engine	Search Term(s)	Limits	Hits	Relevant Hits	Title(s)	Author name	Comments
SCOPUS	DCIS	n/a	3.655				
SCOPUS	DCIS	2002-present	2.315				
SCOPUS	DCIS, standards	2002-present	433	19	Axillary surgery in DCIS: Is less more?	Morrow, M., 2008	
					Recent advances and current controversies in the management of DCIS of the breast	Sakorafas, G.H., 2008	
					Current management of DCIS: A review	Patani, N.,2008	
					Current controversies in the treatment of ductal carcinoma in situ of the breast	Franceschini, G., 2008	
					Ductal carcinoma in situ of the breast (DCIS) under 40: A specific management?	Tunon de Lara, C., 2008	
					Controversies over the role of radiation therapy for ductal carcinoma in situ	Smith, B.D., 2008	
					Sentinel node biopsy is not a standard procedure in ductal carcinoma in situ of the breast: The experience of the European institute of oncology on 854 patients in 10 years	Intra, M., 2008	
					Conservative approach for breast cancer. The experience of the european institute of oncology	Gentilini, O., 2007	
					Ductal carcinoma in situ. Surgical therapy: A mini review	Franceschini, G., 2007	
					Practice Guideline for the Management of Ductal Carcinoma In-Situ of the Breast (DCIS)	American College of Radiology, 2007	
					The NCCN. Invasive breast cancer: Clinical	Carlson, R.W., 2007	

					practice guidelines in oncology		
					Heterogeneity of ductal carcinoma in situ and its effects on management	Mokbel, D., 2006	
					Intra-European Differences in the Radiotherapeutic Management of Breast Cancer: A Survey Study	Jagsi, R., 2006	
					Recent therapeutic options an dexpectations to the pathologist	Lebeau, A., 2005	
					Compliance with guidelines is related to better local recurrence-free survival in ductal carcinoma in situ	De Roos, M.A.J., 2005	
					Standards, options and recommendations for the management of ductal carcinoma in situ of the breast (DCIS): Update 2004	Cutuli, B., 2005	
					The treatment of ductal carcinoma in situ (DCIS) of the breast	Westenberg, A.H., 2003	
					In situ breast carcinoma: Diagnosis and treatment	Hindle, W.H., 2002	
					Standard for the management of ductal carcinoma in situ of the breast (DCIS)	Morrow, M., 2002	
SCOPUS	DCIS, treatment, Europe	2002-present	72	10	The significance of the Van Nuys prognostic index in the management of ductal carcinoma in situ	Gilleard, O., 2008	
					A federal audit of the Belgian radiotherapy departments in breast cancer treatment	Van Houtte, P., 2007	

					Variations in treatment of ductal carcinoma in situ of the breast: A population-based study in the East Netherlands	Schouten van der Velden, P.P., 2007	
					Biology and treatment of ductal carcinoma in situ	Irvine, T., 2007	
					Discrepancies in the diagnosis of intraductal proliferative lesions of the breast and its management implications: Results of a multinational survey	Ghofrani, M., 2006	
					Rationalization and regionalization of treatment for ductal carcinoma in situ of the breast	Smith, G.L., 2006	
					Breast-conserving treatment with or without radiotherapy in ductal carfcinoma-in-situ: Ten-year results of european organisation for research and treatment of cancer randomized phase III trial 10853 - A study by the EORTC breast cancer cooperative group and EORTC radiotherapy group	Bijker N., 2006	
					Ductal carcinoma in situ	Oztop, I., 2005	
					Meeting Highlights: International Expert Consensus on the Primary Therapy of Early Breast Cancer 2005	Goldhirsch, A., 2005	
					The management of ductal carcinoma in situ in North America and Europe: Results of a survey	Ceilley, E., 2004	

SCOPUS	DCIS, treatment, Europe, guidelines		26	21	Clinical epidemiology of breast cancer in the elderly	Louwman, W.J., 2007	
					Factors affecting successful breast conservation for ductal carcinoma in situ	Dillon, M.F., 2007	
					Influence of mammographic screening on trends in breast-conserving surgery in Ireland	Walsh, P.M., 2006	
					Rates of ductal carcinoma in situ: A US perspective	Kumar, A.S., 2005	
					Cancer screening	Jatoi, I., 2005	
					The quality assurance programme of the Radiotherapy Group of the European Organisation for Research and Treatment of Cancer: Past, present and future	Poortmans, P.M., 2005	
					The Assessment of Hormone Receptors in Breast Cancer by Immunohistochemistry	Allred, D.C., 2005	
					Screening mammography controversies: Resolved, partly resolved, and unresolved	Feig, S.A., 2005	
					Estrogen receptor analysis for breast cancer: Current issues and keys to increasing testing accuracy	Diaz, L.K., 2005	
					Adverse effects of screening mammography	Feig, S.A., 2004	
					Utility of Cytologic Specimens in the Evaluation of Prognostic and Predictive Factors of Breast Cancer: Current Issues and Future Directions	Sneige, N., 2004	

					The Auckland Breast Cancer Register: A special project of the Auckland Breast Cancer Study Group	Neave, L., 2003	
					The Quality Assurance programme of the Radiotherapy Group of the European Organization for Research and Treatment of Cancer (EORTEC): A critical appraisal of 20 years of continuous efforts	Garavaglia, G., 2003	
					Screening from the epidemiological point of view	Becker, N., 2002	
					Recent developments in the adjuvant hormonal treatment and in the prevention of breast cancer	Neven, P., 2002	
					The role of the EORTC pathologist in clinical trials: Achievements and perspectives	Spatz, A., 2002	
					Nonpalpable breast lesions	Tejerizo Lopez, L.C., 2001	
					Breast radiotherapy and lymphedema	Meek, A.G., 1998	
					Consistency achieved by 23 European pathologists in categorizing ductal carcinoma in situ of the breast using five classifications	Sloane, J.P., 1998	
					Principles and guidelines for surgeons - Management of symptomatic breast cancer	Blichert-Toft, M., 1997	
					Ductal carcinoma in situ part I: Definition and diagnosis	Delaney, G., 1997	

SCOPUS	DCIS, standards, guidelines	2002-present	20	6	DEGRO practical guidelines for radiotherapy of breast cancer I: Breast-conserving therapy	Sautter-Bihl, M.-L., 2007	
					Recent therapeutic options fand expectations to the pathologist	Lebeau, A., 2005	
					Sentinel lymph node biopsy for localised ductal carcinoma in situ?	Veronesi, P., 2005	
					Standards, options and recommendations for the management of ductal carcinoma in situ of the breast (DCIS): Update 2004	Cutuli, Bl, 2005	
					DCIS: Current concepts in diagnosis and management	Lagios, M.D., 2003	
					Do treatment recommendations from a multidisciplinary breast cancer conference differ from established practice guidelines?	Andersen, J.C., 2001	
SCOPUS	DCIS, guidelines, Europe	2002-present	23				All cited previously
SCOPUS	DCIS, guidelines, US	2002-present	56	4	The current status of breast MR imaging. Part I. Choice of technique, image interpretation, diagnostic accurary, and transfer to clinical practice	Kuhl, C., 2007	
					Optimal management of ductal carcinoma in situ of the breast	Sakorafas, G.H., 2003	
					Coomparison of Screening Mammography in the United States and the United Kingdom	Smith-Bindman, R., 2003	
					International variation in	Elmore, J.G., 2003	

					screening mammography interpretations in community-based programs		
SCOPUS	DCIS, treatment, US	2002-present	167	14	Feasibility of accelerated whole-breast radiation in the treatment of patients with ductal carcinoma in situ of the breast	Constantine, C., 2008	
					Management of females at risk	*Oncologie*, 2007	
					A multidisciplinary approach to the management of breast cancer, part 1: Prevention and diagnosis	Pruthi, S., 2007	
					Ductal carcinoma in situ: Biology, diagnosis, and new therapies	Valenzuela, M., 2007	
					The current status of breast MR imaging. Part I. Choice of technique, image interpretation, diagnostic accuracy, and transfer to clinical practice	Kuhl, C., 2007	
					Recurrent cancer after breast-conserving surgery with radiation therapy for ductal carcinoma in situ: Mammographic features, method of detection, and stage of recurrence	Pinsky, R.W., 2007	
					Results of 23,810 cases of ductal carcinoma-in-situ	Sumner III, W.E., 2007	
					1-23 The Impact of MRI on the Treatment of DCIS	Berg, W.A., 2007	
					Retrospective analysis of 108 ductal carcinomas in situ of the breast treated by radiosurgery association	Fourneret, P., 2006	
					Breast cancer surgery for the 21st century: The	Singletary, S.E., 2006	

					continuing evolution of minimally invasive treatments		
					Changing patterns in diagnosis and treatment of ductal carcinoma in istu of the breast	Meijnen, P., 2005	
					Comparison of Screening Mammography in the United States and the United Kingdom	Smith-Bindman, R., 2003	
					Recent trends and racial/ethnic differences in the incidence and treatment of ductal carcinoma in situ of the breast in California women	Innos, K., 2003	
					An analysis of the application of de Van Nuys prognostic index of in situ breast cancer and its influence on treatment adjustment	Sanchez-Piedra, D., 2003	
SCOPUS	DCIS, treatment, US guidelines	2002-present	49				All previously cited

Organization	Method of Guideline	
NCCN	*Guidelines undergo annual review by a multi-disciplinary expert panel and revision based upon new and evolving scientific evidence in the management of breast cancer.* *The NCCN Guidelines development process utilizes an evidence-based consensus process, and panel members are chosen from the NCCN member institutions to provide multidisciplinary, disease-oriented expertise.* Process: • Panel chosen for disease-specific expertise • Multidisciplinary representation • Advocate participation • Review of evidence by panel • Evidence-based consensus (usually either lower-level evidence including clinical experience or high-level evidence) • Detailed, patient-care-driven guidelines produced • NCCN-wide institutional review of draft guidelines Updated annually	
NCCN Audit Landercasper, 2006	Pre-op – 87% compliance with NCCN guidelines Breast surgery – 97% Lymph node surgery – 97% Radiation oncology – 77% Medical oncology – 62.5% Study population: patients seen by care providers in the integrated care system of the Norma J. Vinger Center for Breast Care (NJVCBC). A retrospective study of all new breast cancer patients seen by members of the NJVCBC in 2004 was performed. N = 200	
SIGN	Levels of evidence: • **1++** High quality meta-analyses, systematic reviews of randomized controlled trials (RCTs), or RCTs with a very low risk of bias • **1+** Well conducted meta-analyses, systematic reviews of RCTs, or RCTs with a low risk of bias • **1-** Meta-analyses, systematic reviews of RCTs, or RCTs with a high risk of bias • **2++** High quality systematic reviews of case control or cohort studies. High quality case control or cohort studies with a very low risk of confounding or bias and a high probability that the relationship	**Women with DCIS who are candidates for breast surgery should be offered the choice of lumpectomy or mastectomy** (*2+, 2++ → A body of evidence including studies rated as 2++, directly applicable to the target population, and demonstrating overall consistency of results*) Three large randomized trials, detected a significant benefit for ipsilateral breast irradiation following breast conserving surgery (BCS) in reducing the risk of invasive and non-invasive breast recurrence in the ipsilateral breast. **Women who have undergone breast conserving surgery should be offered postoperative breast irradiation** (*1++, 1+, 4 → At least one meta-analysis,*

	is causal • **2+** Well conducted case control or cohort studies with a low risk of confounding or bias and a moderate probability that the relationship is causal • **2-** Case control or cohort studies with a high risk of confounding or bias and a significant risk that the relationship is not causal • **3** Non-analytic studies, e.g. case reports, case series • **4** Expert opinion **A** → At least one meta-analysis, systematic review of RCTs, or RCT rated as 1++ and directly applicable to the target population; *or* A body of evidence consisting principally of studies rated as 1+, directly applicable to the target population, and demonstrating overall consistency of results **B** → A body of evidence including studies rated as 2++, directly applicable to the target population, and demonstrating overall consistency of results; *or* Extrapolated evidence from studies rated as 1++ or 1+ **C** → A body of evidence including studies rated as 2+, directly applicable to the target population and demonstrating overall consistency of results; *or* Extrapolated evidence from studies rated as 2++ **D** → Evidence level 3 or 4; *or* Extrapolated evidence from studies rated as 2+	*systematic review of RCTs, or RCT rated as 1++ and directly applicable to the target population; or a body of evidence consisting principally of studies rated as 1+, directly applicable to the target population, and demonstrating overall consistency of results*) No trials were identified that randomized patients at low risk of local recurrence to observation versus adjuvant radiation to determine if any patients may be treated without adjuvant radiation therapy. **The benefits and harms of hormonal therapy should be discussed with women with DCIS and treatment decisions made based on individual circumstances** (*2+, 1+, 4 → Recommended best practice based on the clinical experience of the guideline development group*) One randomized trial has reported that the use of tamoxifen in women with DCIS is associated with a lower disease recurrence, particularly in women less than 50 years or with receptor positive disease. On this basis, it has been recommended that women should be informed of the option of five years of tamoxifen therapy and of the harms and benefits associated with tamoxifen use, but that the absolute benefit is small. *Studies available
BASO	Levels of evidence: evidence is graded 1 (derived from randomized controlled	**1- Pre-operative diagnosis:** 20% of screen-detected breast cancers were non-

	trials – RCTs), 2 (observational studies) and 3 (professional consensus). These are broad categories and the quality of evidence within each category varies widely. There have been randomized trials of adjuvant radiotherapy after breast conservation for DCIS.	invasive. The UK non-operative diagnosis rate for non-invasive cancer was 81%. The non-operative diagnosis rates for C5 only is 1%, C5 & B5 is 2%, and B5 only is 79%. **2- Surgical Waiting Time (1):** 56% of women had their first therapeutic treatment within 1 month after their first assessment visit. **3- Surgical waiting time (2):** 94% of women had their first therapeutic treatment within 2 months of their first assessment visit, with a median waiting time of 29 days. For cases which did not have a non-operative diagnosis, only 86% of women had their first diagnostic operation within 2 months of their first assessment visit, with a median waiting time of 36 days. **4- Type of breast surgery (1):** 1% received no therapy. 70% of non-invasive cancers were treated with conservation therapy. Approximately 30% received mastectomy. Approximately 23% of non-invasive cancers were treated with mastectomy. **5- Type of breast surgery (2):** Overall only 13% of cancers with a whole tumor size <15 mm were treated with mastectomy compared with 18% of cancers with an invasive size <15 mm. These data indicate that the presence of in situ disease accounts for a proportion of the mastectomies performed on tumors with an invasive size of 15 mm. **6- Number of breast operations:** 17% of cancers with a proven non-operative diagnosis by C5 cytology and/or B5 core biopsy underwent more than one therapeutic operation. 17% of non-invasive cancers had more than one therapeutic operation. For the 888 cancer without a non-operative diagnosis, 51% have only a diagnostic operation. 44% had a second operation, which is also

		their first therapeutic operation. For 46 cases, 2 therapeutic operations were performed. 10% of non-invasive cancers with a B5a (non-invasive) non-operative diagnosis, initially treated with conservation surgery, went on to have a mastectomy. Non-invasive cancers with a B5a (non-invasive) core biopsy had an initial core biopsy and had initial mastectomy rate of 26%. Non-invasive cancers with a B5a (non-invasive) core biopsy had a repeat operation rate of 20%. In the UK as a whole, 12% of cancers underwent repeat conservation operations to clear involved margins and 7% of cancers had repeat operations which converted initial conservative operations to a mastectomy. **7- Margins (1):** 16% of non-invasive cancers with a B5a (non-invasive) non-operative diagnosis (initially treated with a conservation operation) had repeat operations to clear margins. **8- Margins (2):** In 2006/07, 41% of the 3185 non-invasive cases are recorded as less than 15 mm. The size of 3% is not assessable. 334 non-invasive cancers were recorded as large (40+ mm), high cytonuclear grade lesions. Of these, 18% were treated with conservation surgery. **9- Cosmesis:** 13% of cancers treated with mastectomy were recorded as having immediate reconstruction. Of these cancers, 38% were non-invasive. Only 10% of invasive cancers treated with mastectomy were recorded as having immediate reconstruction compared with 23% micro-invasive and non-invasive cancers treated with mastectomy. **10- Axillary surgery (Axillary dissection in DCIS):** Invasive cancer statistics… **11- Axillary surgery (SLN in DCIS):** 28% of non-invasive cancers had known nodal status. 81% of the non-invasive cancers with known nodal status were

		treated by mastectomy. For non-invasive cancers with known nodal status, 83% of those undergoing conservation surgery and 90% of those undergoing mastectomy had non-invasive disease predicted by a B5a (non-invasive) core biopsy result. The median number of nodes taken for non-invasive cancers undergoing conservative surgery and mastectomy were 3.5 and 4 respectively. The maximum number of nodes taken for cases treated with conservative surgery and mastectomy were 15 and 33 respectively. **12- Grading:** 59% of non-invasive cancers treated with conservation surgery had high cytonuclear grade (and 40+ mm), 0 had high cytonuclear grade (and 40+ mm), 26% had high cytonuclear grade (and unknown size), 24% had unknown cytonuclear grade (and unknown size). 25% of surgically treated, non-invasive cancers had intermediate grade, 10% had low grade and for 4% the grade was not accessible. In 2006/07, only 7% of non-invasive cancers had unknown cytonuclear grade and/or size. **13- Radiotherapy:** 44% of women received the most common treatment for screen detected breast cancer in the UK which was surgery, radiotherapy, and hormone therapy. Of the non-invasive cancer cases treated with conservation therapy, 53% had adjuvant radiotherapy recorded. 28% of non-invasive cancers not given adjuvant radiotherapy were high cytonuclear grade and 23% were at least 15mm in diameter. **14- Hormone treatment:** Hormone therapy was the main adjuvant treatment for women over 58; being given to 75% of the cases (both invasive and non-invasive).

International Cancer Screening Network
(ICSN)

ICSN DCIS Working Group

Protocol of the DCIS detection and management project

STUDY PROTOCOL AND DRAFT TABLES FOR REPORTING RESULTS
November 2009

Detection and management of screen-detected ductal carcinoma in situ (DCIS). A survey within the International Cancer Screening Network (ICSN)

Background

The rate of ductal carcinoma in situ (DCIS) has increased up to ten fold in the last 25 years. This dramatic increase has been attributed to the diffusion of screening mammography for early diagnosis of breast cancer. Among all cancer cases detected by screening, nearly 20% are DCIS, yet the natural history of this lesion remains mysterious. While it is believed that some DCIS is a precursor of invasive breast cancer, there is considerable debate about the proportion of DCIS that might also regress. At this time it is not possible to identify the lethality of an individual cancer, but overall survival from DCIS, once detected and treated, is about 95% at 5 years. Management guidelines for DCIS increasingly take this background into account and try to encompass the need to provide adequate care and avoid unnecessary treatment. Guidelines for how to do this vary and have been most explicit in the European countries where organized screening programs exist. Recommendations in the United States have been less explicit until recently when xxx published a consensus statement on treatment. Our interest is in documenting the variation in areas where guidelines address treatment choices. We are not interested in documenting compliance with a specific guideline because they vary. Current treatment considerations are highlighted in Table 1 and include characterizing the lesion prior to surgery, time-from abnormal screen to surgery, use of breast conserving surgery, axillary node dissection rates, and radiotherapy. The research aims at reporting the treatment occurring in xxx countries including yy from Europe, zz from Asia, and aa from Latin America. The purpose of the report is two fold: 1). To assess practice variation in the diagnosis and management of screen detected DCIS among participants in the International Screening Network, and 2) To investigate the potential for international studies of DCIS including whether it is possible to assemble a cohort of non-operatively diagnosed DCIS which were not prescribed or refused surgery.

Methods

We will survey the ICSN countries regarding the DCIS cases they have generated within their screened population. We will do data collection to assess the characteristics of the DCIS diagnosis and treatment process using nine process indicators listed in Table 1. Those countries that can collect the relevant data will be included in the report. There will also be comment on the current limitations in data collection, if any exist. The hope is that many countries will be able to supply data, but we expect to make some adjustments in the data definitions to accommodate variation in data collection methods and data realities across the ICSN.

Seven process indicators on the management of DCIS have been identified by some of the Authors (pre-operative diagnosis, surgical wait time, type of breast surgery, axillary surgery, sentinel node biopsy, nuclear grading, radiotherapy: Table 1) based on treatment guidelines and published reports (See systematic literature review in this Protocol, page 12). Indicators encompass issues covered by recommendations rather than compliance with a specific recommendation. Data collection forms have been devised for reporting the appropriate information separately for screens categorized as initial (the woman's first known screen in her life), subsequent (second or more screen in her life) screens, or the screened population as a whole. It is expected that some programs will only be able to report the latter, but we prefer separation by initial and subsequent screens where possible, since DCIS rates may differ for these two groups.

Critical definitions are given below.

"**DCIS detected in programme**" is an important term. "Detected in" means that a screening mammogram performed at a programme facility was the reason for additional imaging. Once additional imaging is done it can lead to positive or negative diagnostic testing and positive or negative biopsy. We are focused on mammography, not the programme so we are not considering the results of the diagnostic evaluation. As noted in the tables, if DCIS is diagnosed within one year of the abnormal screening mammogram, then it is counted as a diagnosis. The year of the diagnosis, in all cases, should be the year of the abnormal screen, and that may be earlier than the date when abnormal tissue was recorded. We choose the abnormal screening date to standardize the data.

The diagnosis of Ductal Carcinoma In Situ is based upon a histology diagnosis.

Pre-operative diagnosis means that there is a histology or cytology diagnosis of cancer before operative excision. If there is ambiguous histology or cytology, even though core or aspiration biopsies were done prior to the open excisional biopsy / surgery that made the diagnosis, then there is not a preoperative diagnosis.

A questionnaire with the data collection forms and more definitions (**see Annex 1-4**), is addressed to members of the ICSN, both national representatives ( ) and individual members ( ). Responses will be solicited referring to national and / or regional scale for any time period available within 2004-2008 (one form per calendar year), for ages 40-74.

The questionnaire includes the request for any recent published or unpublished reports issued by the screening programme on the management of screen detected cases and the proportion of screen-detected DCIS, if any, that received no surgical treatment.

The Excel Data collection forms are enclosed as Annex 1-4. The data collection forms have been piloted with actual data from the Torino (Italy) screening programme during the summer 2009. The data collection forms include the relevant definitions and instructions.

The draft format of the tables aimed at reporting results are enclosed at the end of this document.

Table 1

Process of care indicators for operated DCIS

Indicator	Definition	References	
Pre-op Dx	The proportion of DCIS cases disagnosed by pre-operative cytological (C5) or histological (B5) diagnosis for cancer. The number of missing values (eligible patients with no information on the item studied) must be indicated separately. (pre-op dx = needle, core, or vacumm assisted biopsy)	Will note the # but exclude the missing values	Will include all cases of DCIS as the denominator
Surgical wait	The proportion of DCIS patients operated with first surgery (only patients for whom the first treatment is surgery) within 60 days from screening mammogram. The number of missing values (eligible patients with no information on the item studied) must be indicated separately.	Will include all cases of DCIS as the denominator	
Type of breast surgery	The proportion of patients diagnosed with DCIS operated on with conservation surgery. The number of missing values (eligible patients with no information on the item studied) must be indicated separately.		
Axillary surgery	The proportion of patients diagnosed with DCIS with axillary dissection (not even Level 1). The number of missing values (eligible patients with no information on the item studied) must be indicated separately.		
Sentinel Node	The proportion of patients with Sentinel lymph node biopsy (SLN) among women diagnosed and operated upon for DCIS.	SLN = sentinal lymph node biopsy	
Grading	The proportion of patients operated on for DCIS with known histopathology nuclear grade on final diagnosis. The number of missing values (eligible patients with no information on the item studied) must be indicated separately.		
Radiotherapy	The proportion of DCIS patients who had breast conservation surgery who received RT. The number of missing values (eligible patients with no information on the item studied) must be indicated separately.		

Program Descriptors (from the ICSN website)

	Country/region	Invitation to screening	Year implemented	Number of facilities	Age group of target population	Size of target population	Screening interval - years (age 50 or older)	S i
1	**Czech Republic**	PI, PR, MA	2002 N	59	45-69	1.688.206	2	
2	**Denmark**	PI	1992 R	2	50-69	113.770	2	
3	**Finland**	PI	1989 N	27	50-59	650.000	2	
4	**Ireland**	PI	2000 N		50-64		2	
5	**Italy**	PI	1990 R	67	50-69	3.301.509	2	
6	**Japan**	PI, MA	2000 N		50-69	35.500.000	2	
7	**Luxembourg**	PI	1992 N	9	50-74	44.000	2	
8	**Netherlands**	PI	1988 N	65	50-75	2.290.000	2	
9	**Norway**	PI	1996 N	30	50-69	550.000	2	
10	**Spain, Navarra**	PI	1989 R	3	45-69	80.000	2	
11	**Spain, Valencia**	PI	1989 R	3	45-69	80.000	2	
12	**Switzerland**	PI	1999 R	6	50-69	80.000	2	
13	**United Kingdom**	PI	1988 N	93	50-69	2.400.000	3	
14	**USA**	PR, MA	1991 N	173	40-74+	n/a	1-2	

Source: ICSN internal and public website

Abbreviated Terms

PI - Personal Invitation (Direct communication to women recommending they schedule a mammogram); PR Physicia

MA - Media Advertising

N - National; R - Regional

CBE - Clinical Breast exam; MM - Mammogram; DM - Digital Mammogram

Draft Tables for reporting results in a publication – Detection

DCIS detection rates/screen by age

We will present aggregate data by country and age.

Age	Number of screens	Detected cases of Invasive Cancer	Detected cases of DCIS	Pathologic size of DCIS* %/≤20mm
40-44				
45-49				
50-59				
60-69				
70-74				
Unknown				

DCIS detection rates/screen by country or program

Country	Number of screens	Invasive	DCIS	Pathologic size %/≤20mm
Italy				
etc.				

*Mutifocal disease will be in the denominator

Draft Tables for reporting results in a publication – Diagnosis and Treatment

	Preoperative Diagnosis	Surgical wait	Type of breast surgery	Axillary dissection	Sentinel Lymph node	Grading	Radiotherapy
Country	n/N % of DCIS with pre-operative diagnosis	n/N (%)<60 D	n/N (%)BCS	n/N (%) using nodal dissection	n/N(%) SNL	n/N (%) with nuclear grading	n/N % Rxed
xxx							

N= # DCIS cases
n= # of cases with characteristic of interest

International Cancer Screening Network (ICSN)

ICSN DCIS Working Group

Protocol of the DCIS detection and management project

INVITATION LETTER
December 2009

12/xx/09
ICSN member
Address

Dear
At the last meeting of the ICSN in Denmark we held a discussion of Ductal Carcinoma in Situ (DCIS) and agreed it would be a good focus for a comparative study. DCIS rates have increased with screening, and DCIS treatment is variable. At the time of the meeting we agreed to draft a paper outline, including tables and to formulate a request for data. The attached files are the study outline, study tables and three files that constitute the request for data. Our purpose is two fold: 1). To assess practice variation in the diagnosis and management of screen detected DCIS among participants in the International Screening Network, and 2) To investigate whether it is possible to assemble a cohort of non-operatively diagnosed DCIS who were not prescribed surgery or refused it
.
We hope that your country will want to participate and will be able to send the data. Our intent is to gather the data for discussion at the next ICSN meeting in Oxford, England in June 2010. *We therefore would like the data by April 1, 2010.* Please send the data in the attached spread sheets via email to Kathy Sedgwick at the National Cancer Institute (Sedgwickk@mail.nih.gov). Kathy will gather the data and then send it to Antonio. Please label the email in the subject line with (ICSN DCIS study). National, regional, or local screening program data can be submitted. Therefore if you do not have national data available, please feel free to send this data to single regions or programs within your country. We would be most appreciative if you would inform us of the appropriate contacts for future correspondence with your office, or with the leadership at the program or region where you forward this request.
Here's a bit more detail about the study. We've attached three spreadsheets for gathering data but you do not need to complete all of them. Ideally we want aggregate data from the programmes by each year from 2004 through 2008, and by the screening exposure of the woman (first screen, subsequent screen). Data on "first screens" is intended to include women without a prior history of screening mammography before the screening examination that found the DCIS. Consistent with European definitions of screening exposure, those women with any prior screen before the screen associated with the DCIS diagnosis should be included in the "subsequent screen" group.
There are three spreadsheets but you only need to complete two types/year at most. The number of spreadsheets you complete depends upon whether you can separate women with DCIS on an initial screen from women diagnosed at a "subsequent screen". If you cannot do that, then send a single summary with your aggregate data for all cases. Note that we are interested in some basic descriptors of your programme so we need the total number of screens, invasive cancers, lobular carcinoma in situ, and ductal carcinoma in situ for your programme by age as requested in the tables, but also some programme descriptors such as the target age group, and use of mailed reminders etc. that are not included in the data request. We will get these latter descriptors from the ICSN website for the programmes that join the study. We will also let you see them to confirm their accuracy. Please complete the tables with the aggregate data requested. We know it may not be simple to do in some cases. Below, we have included some specific definitions relevant to completing the tables, but there is detail in the data request form as well.
"**DCIS detected in programme**" is an important term. A screen detected case is defined as a case diagnosed within one year of a positive screening test performed at a programme facility. A positive test is one in which any additional evaluation is recommended. Diagnosis must be histological by needle biopsy (if not operated) or post-operative.
Screening Test: the screening mammography views only. A woman may have multiple tests included in the data base if she has returned for repeat screenings during the observation period.

We hope that you will want to participate in this study. Each country donating data will be able to include an author on the paper. There is a small study group that has been developing the paper and will draft its content for circulation and discussion. That study group includes Antonio Ponti, who will be the first author on the paper, Stephen Taplin, Ted James, Karla Kerlikowske and Elsebeth Lynge. Antonio, Elsebeth, and Stephen have been working with breast cancer screening programmes in Italy, Denmark, and the US for many years and are longtime members of the ICSN. Ted is a surgeon with the US Breast Cancer Surveillance Consortium. Karla is a researcher at the University of California in San Francisco.
Please send a note now to Kathy Sedgewick (Sedgwickk@mail.nih.gov) with a copy to Antonio (Antonio.ponti@cpo.it) regarding whether you plan to participate and/or whether you have forwarded this request to someone else in your country. We look forward to hearing from you. If we do not hear from you or receive data by April 1, 2010 we will assume you are not participating. Thank you for your consideration of this study.
Yours Truly,

Antonio Ponti Stephen Taplin

International Cancer Screening Network
(ICSN)

ICSN DCIS Working Group

Protocol of the DCIS detection and management project

MINUTES OF THE OXFORD STUDY GROUP MEETING
23 June 2010

Minutes of the ICSN DCIS Quality of Care Group
Oxford 23 June 2010

About 35 people participated.

Agenda:

2:00-2:30 Welcome/introduction	Stephen Taplin & Antonio Ponti
2:30-3:00 Pathology on screen detected DCIS. Scientific background and uncertainties	Clive Wells (invited guest)
3:00- 3:15 Review of programme descriptors	Stephen Taplin
3:15- 3:45 Review of data completeness	Ponti & All Participants
3:45- 5:15 Review of tables	Ponti & All Participants
5:15-5:30 Conclusions/next steps	Ponti/Taplin

Introduction

The group was established two years ago at the Copenhagen meeting in order to address an area of particular interest for breast cancer screening programmes; the impact of DCIS upon screened women. Because DCIS is appears to be a consequence of screening, the variation in treatment between local excision and mastectomy has a large potential impact. The existing potential for overdiagnosis calls for identifying and reducing any overtreatment (as well as undertreatment). At the last meeting of the ICSN quality of care group we agreed to focus on variation in DCIS management. As a first step the working group set up an international aggregate data survey aimed at describing DCIS rates and management practice variation across countries. The subgroup that drafted an outline of the paper and established the survey included: Antonio Ponti MD, Stephen Taplin MD, Elsebeth Lynge PhD, Karla Kerlikowske MD, Ted James MD, and Katherine McElroy.

Background: At the time of the meeting we reviewed the above background and then heard an overview presentation on DCIS.

Clive Wells MA MB FRCPath (co-ordinator, European Group of Breast Cancer Screening Pathologists) has been invited by the Working Group to the meeting and asked to illustrate the pathology of DCIS. Among other issues the discussion covered multifocality. Dr. Wells pointed out the multifocal DCIS could be easily conceived as a cross sectional view of a diffuse but unified growth; like a cross section through the branches of an oak tree. At the time of the meeting Dr. Wells agreed that it is reasonable to analyse multifocal/multicentric and large DCIS in the same broad category. He also discussed the distinction between comedo and high grade DCIS. He made the point that low grade DCIS could be considered as a possible candidate for observation.

Survey – Scope and dissemination of results

The original aim was publishing one paper in a peer reviewed journal, but there may be material for submitting two papers:

1) Detection rates and diagnosis of DCIS. A survey in the International Cancer Screening Network.
2) Management of screen-detected DCIS. A survey in the International Cancer Screening Network.

Survey papers – Authorship

Each Country contributing data will be listed with one Author and additionally at least one member under the heading “ICSN DCIS working group”.

Survey – Methods

Programme descriptors. The Table will be completed using data from the ICSN website and will circulated among participants in order to be checked. Given difficulties in definition, the item on number of registries may be dropped. On the other hand, information on data sources by Country is needed as well as on classifications used (e.g. grade, definition of initial / subsequent tests).

Waiting times. Ondrei Majek pointed out that not operated women should be counted, for this indicator, as not eligible cases rather than cases with missing information. This will be fixed.

Survey – Results

12 Countries provided data so far for a total of more than 5,000 DCIS (all ages). Some other Countries (UK, Switzerland) have indicated that they will provide data. Completeness of information provided varies. Some Countries have re-submitted or will re-submit the forms after having completed sections with missing data.

Eight main tables, each with results by country and - when appropriate - by age class and calendar year, were discussed. Results tables had been distributed to contributors a few days before the meeting. **The need for further analyses has been identified**:

1. DCIS rates by grade and calendar year (data available).
2. Type of breast surgery by DCIS size (data available).
3. Axillary surgery by grade and calendar year (all ages and all tests pooled – additional data needs to be collected from Countries where information is available) (see Excel Tables in Annex 4).
4. Possibly, axillary surgery by size and calendar year (all ages and all tests pooled – additional data needs to be collected from Countries where information is available) (see Excel Tables in Annex 4).

   There was concern that the introduction of digital mammography and vacuum assisted biopsy techniques might affect rates of preoperative diagnosis. Consider asking the years when DM and vacuum assisted biopsy were introduced in the programme. This question would be raised in a follow-up communication to this meeting.

Survey – Time table

A new call for data will be issued together with new tables (points 3 and 4 above) indicating that the deadline for new Countries for submitting data or for current contributors for completing their data and indicating names for authorship is **31 October 2010**.

Results Tables and programme descriptors will then circulate for checking purposes along with drafts of the manuscript(s). Countries wishing to receive now the Tables with the current update can require that to antonio.ponti@cpo.it .

Next steps

1) Antonio and Stephen will send minutes of the meeting to all DCIS working group members

2) Contributing sites should work with Antonio to have any corrections and any supplementary table to him (see points 3-4 above) by October 31, 2010.
3) Sites that have not submitted data, but want to participate, need to submit their data by 10/31/2010
4) Antonio and Stephen will work on a note to the participating countries regarding this meeting and the potential for additional data tables relevant to the paper.

The group has acknowledged the growing recognition of the need of trials on surgery vs active surveillance possibly matched with hormone treatment of selected DCIS sub-categories. Whether the group can further contribute to this stream of research and in which way, possibly by the establishment of a low grade DCIS "cohort", has to be determined.

Stephen Taplin and Antonio Ponti