

Quality management for systemic treatment of breast cancer

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SUMMARY

Limited literature is available about quality management in systemic treatment of breast cancer patients. Professionals are the key players in the identification and interpretation of quality indicators. The Belgian Society of Medical Oncology takes the lead in the field of quality management of systemic treatment for cancer, especially breast cancer. A narrow collaboration with the Belgian Cancer Registry will allow benchmarking. The results will be presented and discussed between peers of the society. This should lead to better outcomes for all Belgian centres. All Belgian Society of Medical Oncology members are called for active participation

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INTRODUCTION

Quality management is a key requirement to obtain the best care for our patients. Defining the best quality, we are confronted with an ideal humanistic approach on the one hand and the real world situation where budget restrictions have to be taken into account, on the other hand. Not everything can be offered and reimbursed.¹ Budget considerations with optimal use of our resources are extremely important. Quality indicators are a tool in control and reflection about the given care and can be used for benchmarking.

In previous years, a lot of effort was made in defining quality indicators for breast cancer in Belgium. Based on EUSOMA guidelines and in collaboration with several partners, a set of quality indicators were defined. Eleven process indicators

such as type of surgery, information on hormone receptor status, postoperative radiation therapy after breast conserving surgery, presence of pre-operative microscopic confirmation as well as two outcome indicators, (adjusted) overall survival and (adjusted) relative survival (as proxy for disease-specific survival), were defined.²

However, only few indicators were identified on systemic treatment. Only two were mentioned by EUSOMA and a few more by the Belgian Health Care Knowledge Centre.³ All the quality indicators of systemic treatment were identified by expert opinion. The Belgian Society of Medical Oncology (BSMO) has the ambition to play an important role in the professional organisation and evaluation of systemic cancer treatment.

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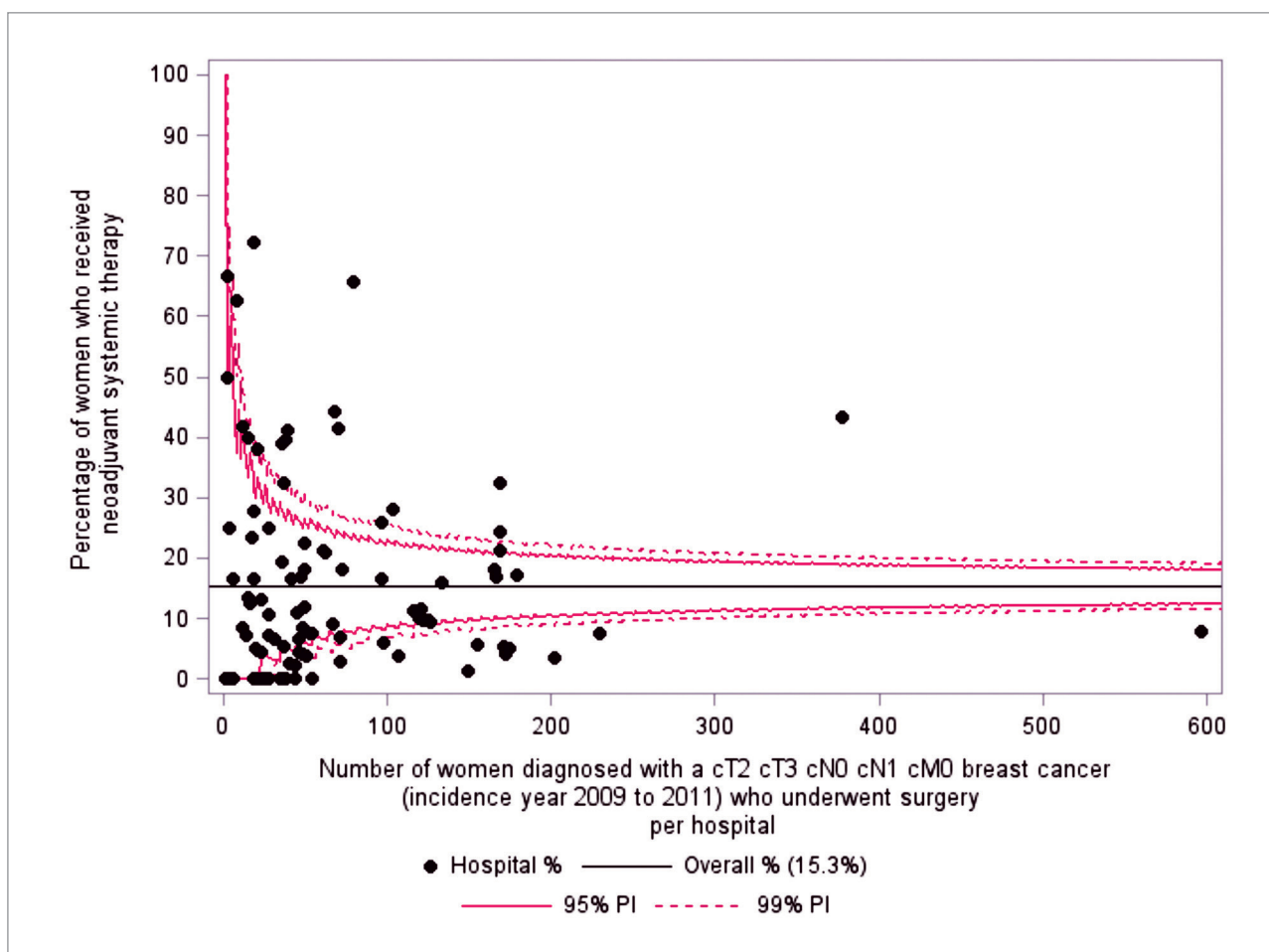


FIGURE 1. Percentage of neo-adjuvant chemotherapy given to breast cancer patients cT2, cT3, cN0, cN1 per hospital.

THE ROLE OF THE PROFESSIONALS IN A QUALITY INSTITUTE

In surrounding countries such as the Netherlands and the United Kingdom (UK), a lot of energy was put in the set-up of quality institutes for health care. In the UK, the National Institute for Clinical Excellence was started in 1999 (NICE; www.nice.org.uk). They publish guidelines based on evaluations of efficacy and cost-effectiveness and play a role in pioneering technology assessment. In the Netherlands, The National Health Care Institute (Zorginstituut Nederland; www.zorginstituutnederland.nl) and its quality division were created to maintain the quality, accessibility and affordability of health care. One of its tasks is to encourage quality improvements by helping parties improve their health care and helping patients find their way to good-quality care.⁴ In Europe, the EuroHealthNet was created (www.eurohealthnet.eu) with the mission to help build healthier communities and tackle health inequalities within and between European States.

In recent years, a lot of initiatives were also taken by public authorities to promote and control health care and quali-

ty. In addition to the Belgian Scientific Institute for Public Health, a separate Quality Institute will start in the Flemish Region in the near future. Last year, during a meeting in the Flemish Parliament, the role of the professionals was endorsed as key players in defining the most optimal care for each patient. A professional organisation such as the BSMO has to take the lead in the quality assurance of systemic treatment for cancer.

DEFINITION OF QUALITY INDICATORS IN SYSTEMIC TREATMENT IN ONCOLOGY

Systemic treatment is defined as the use of drugs that spread throughout the body, such as cytotoxic chemotherapy, endocrine treatment, targeted therapy and more recently immunotherapy. The literature about quality indicators in systemic treatment in oncology is limited, but the number of studies focusing on this is increasing.⁵ Quality indicators in systemic treatment must be subdivided into structural indicators related to the organisation of the treatment, and process indicators related to the treatment itself but influ-

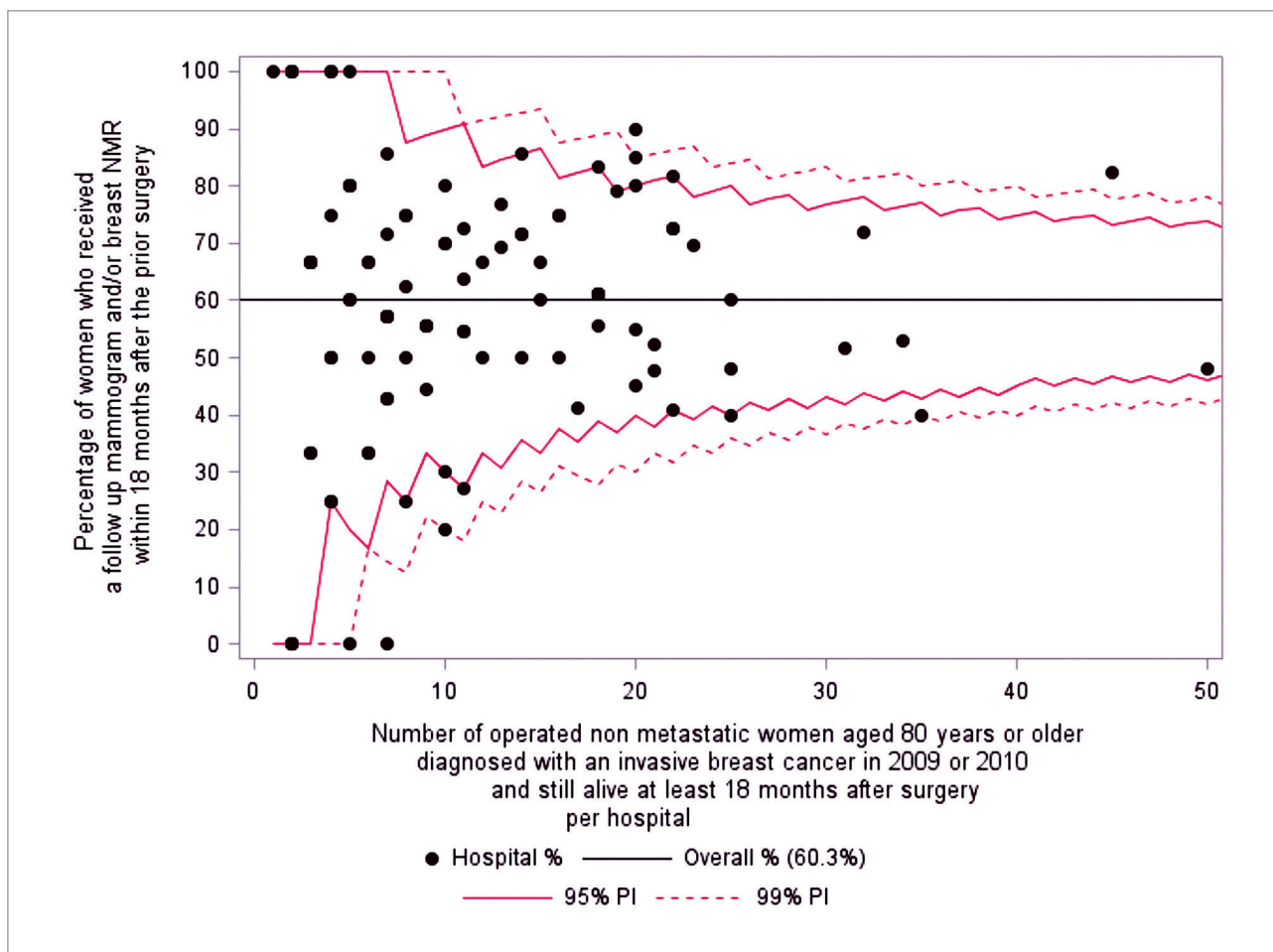


FIGURE 2. Percentage of follow-up mammograms or nuclear magnetic resonance examinations prescribed for breast cancer patients of 80 years or older within eighteen months after surgery.

enced by both patients and health care providers. In addition, outcome indicators measure what happens to the patients as the end result of the treatment.⁶ The latter are difficult to compare because they depend on many circumstances. The sample must be big enough to accurately assess these outcome indicators, and the follow-up must be long enough. In the future, indicators will have to be used in daily practice, thanks in part to their integration into the electronic medical record. They must address the daily challenges and also reflect patients' preferences, enabling the development of treatment heterogeneity.

QUALITY INDICATORS AND SOME OF THEIR PITFALLS

A lot of challenges are present when developing high quality indicators.⁷ The indicators have to be defined correctly and must be calculated using accurate data sources. Conflicts of interest, overuse, underuse and misuse of diagnostic and treatment modalities can harm patients and are difficult to detect. In addition, many modalities of care can-

not be measured. Variation of cancer care is not wanted in cases where the evidence is clear, or when patients not receiving specific care results in worse outcomes. The right standard is difficult to define because it depends on the personal view points of physicians and on the quality of the evidence-based system. In *Figure 1* we observe a striking difference between the percentages of neo-adjuvant chemotherapy given across hospitals for limited breast cancers, suggesting the lack of evidence for treatment guidelines of these patients five years ago.

The same is seen in *Figure 2*, which compares the percentage of follow-up mammography use in our hospitals, in patients 80 years of age or older. No evidence exists to suggest an advantage for mammography follow-up in this age group.

IDENTIFICATION OF QUALITY INDICATORS IN SYSTEMIC TREATMENT

During the last BSMO meeting in February 2017, the initiative was taken to start a task force to work on the quali-

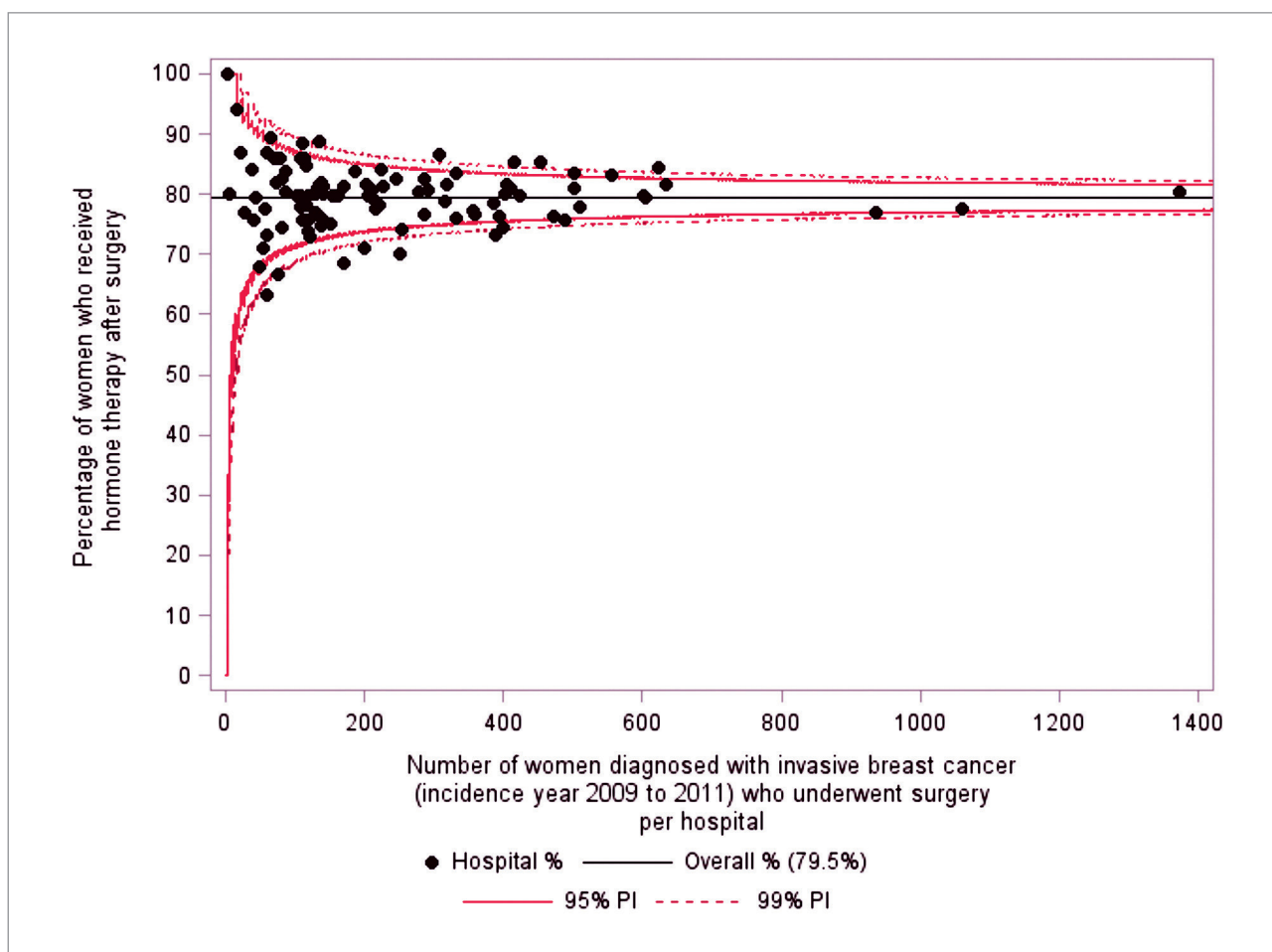


FIGURE 3. Percentage hormone therapy prescribed to breast cancer patients in the Belgian hospitals within nine months after surgery.

ty management and the identification of quality indicators for systemic treatment. Breast cancer was chosen as the first cancer type for this work and can serve as an example for the other tumours.

Structure indicators: Three were proposed: *Education/formation* with the promotion of the ESMO/ASCO Global curriculum in medical oncology ensuring that patients are treated by well-trained physicians, respecting a multidisciplinary approach.⁸

Day clinic facilities delivering systemic treatment in a separate oncology unit dedicated for cancer patients. Availability of trained and recognised oncology nurses is mandatory for safe administration.

Lastly, a close collaboration with *dedicated pharmacy facilities* must be in place. Because the prescription and delivering of the drugs is a high-risk process and prone to many errors, special attention is required during each step.⁹

Process indicators: Access to experts in systemic treatment,

treatment delivery following guidelines and equity in systemic treatment with respect to confounding factors (such as race, income, age and location) are of major importance. The Cancer Registry recently reported the results of endocrine treatment and chemotherapy given in the Belgian hospitals. Although the administration of endocrine treatment seems equally distributed around 80% in our centres, much more variation is present for the administration of chemotherapy. The BSMO task force on systemic treatment in breast cancer has identified twelve process indicators which are relevant, measurable and subject to improvement. The following quality indicators were selected and will be presented during the next BSMO meeting in 2018.

NEGATIVE INDICATORS:

% PET/CT scan in stage I tumours.

% use of growth factors if chemotherapy is administered in a metastatic setting.

% of patients receiving chemotherapy during the last two weeks of life.

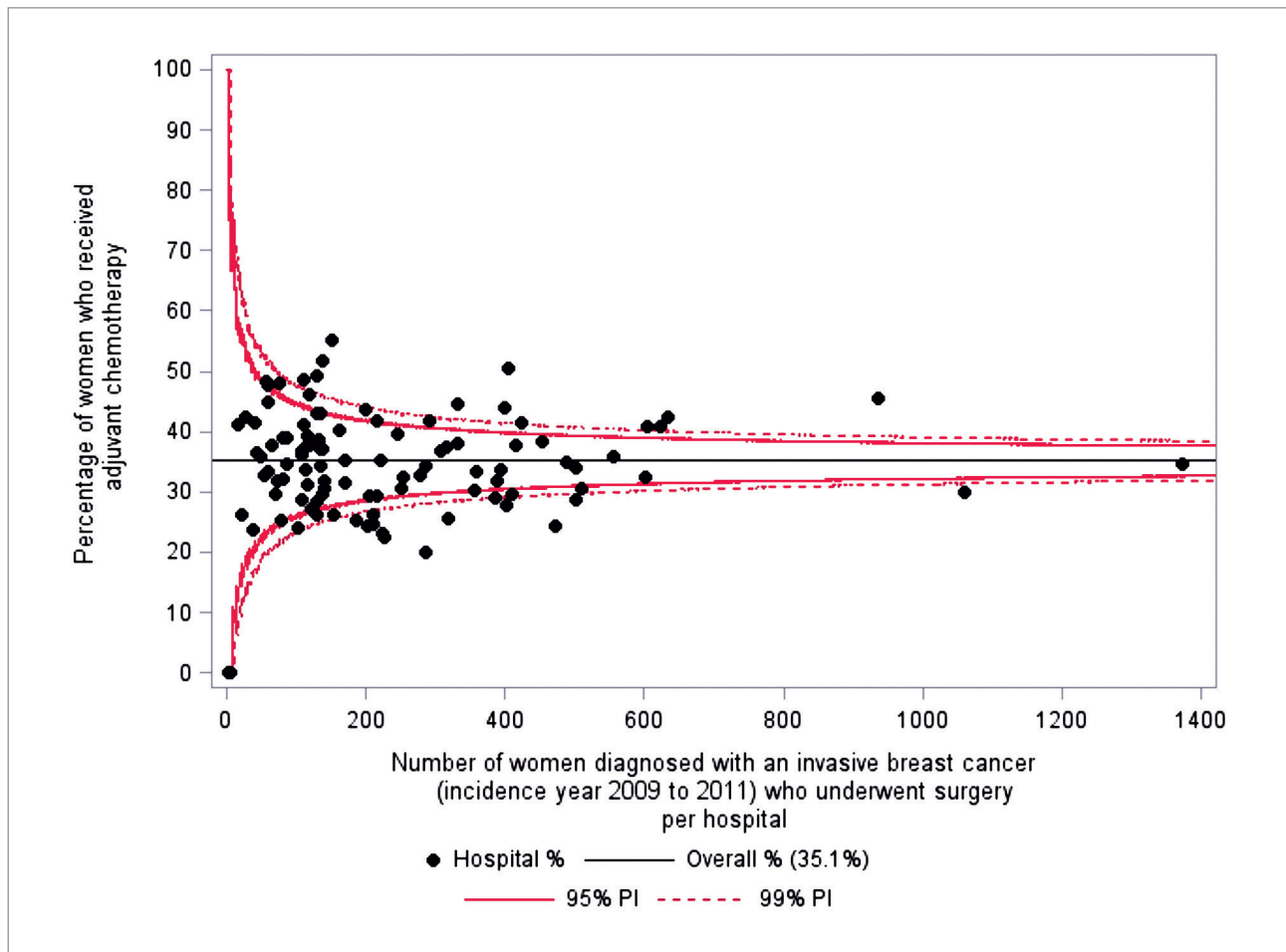


FIGURE 4. Percentage chemotherapy prescribed to breast cancer patients in the Belgian hospitals within four months after surgery.

POSITIVE INDICATORS:

Patients under 70 years receiving therapy for stage T1c or more

- % chemotherapy in different subgroups.
- % trastuzumab if HER2 + (ISH +) in general and if T1a (negative indicator).
- % endocrine treatment if oestrogen receptor (ER) positive.
- % receiving at least five years endocrine treatment.

Geriatric patients (more than 75 years)

- % adjuvant chemotherapy in the different subgroups.
- % receiving endocrine therapy instead of surgery (ER +, T1, T2).

Metastatic patients

- % ER + with first line endocrine treatment.
- % single agent chemotherapy versus combination.

OUTCOME INDICATORS

They measure the final results of the given care: long term overall (adjusted) survival and (adjusted) relative survival

(as proxy for the disease-free survival) as most important outcome indicators. Although they are most important as endpoint, they are difficult to interpret because of the difficulties to identify all the factors influencing the achieved value. For example, a new TNM classification and more (accurate) diagnostic procedures can give a better result for all groups because of stage migration (the so-called Will Rogers phenomenon, as happened in lung cancer). More importance was recently given to the quality-of-life and patient reported outcome measurements.

The International Consortium for Health Outcomes Measurement (ICHOM) initiative strives to develop standardised health outcome measures for the most frequent diseases i.e. breast cancer. Their mission is to “unlock the potential of value-based health care by defining global Standard Sets of outcomes and by reporting of these measures worldwide” (www.ichom.org).¹⁰

Besides the registration of an extended list of clinical variables, the ICHOM data collection reference guide also contains a lot of questionnaires for patients about quali-

KEY MESSAGES FOR CLINICAL PRACTICE

1. The use of systemic treatment in breast cancer in Belgium varies significantly between centres.
2. Our analysis will show the differences leading to benchmarking and finally to better results.
3. No blame-and-shame policy but discussion between peers will be promoted.
4. A Pay for Quality system must first take into account the recognition as a breast clinic (= structure indicator) in Belgium.
5. The BSMO as a professional organisation must take the lead in the quality management of systemic treatment of cancer

ty-of-life.¹¹ Their feasibility for breast cancer was first tested in Belgium at Cliniques universitaires Saint-Luc (UCL) in Brussels. For the moment, this process seems too complicated and not feasible for our centres in routine practice because of the large number of questionnaires that need to be filled in, which is time consuming and will require the funding of additional resources.

ROLE OF THE CANCER REGISTRY IN THE QUALITY MANAGEMENT

The Belgian Cancer Registry works together with many partners providing data of our breast units. The Registry can play an important role in this project since they offer a source of expertise in the techniques of abstracting, data

handling, linkage procedures and data analysis.

They promote an integrative quality management system by introducing guidelines, protocols, care pathways, evaluation and monitoring followed by improvement projects.¹² They recommend the Plan, Do, Check, Act circle of Deming as a continuing process.

HOW TO ORGANISE THE QUALITY CONTROL?

Recently, the federal government stressed the importance of quality and wants to introduce a Pay for Quality system within the classical hospital financing.¹³ Hospitals should be reimbursed more if they improve their quality and if their outcome is better. We stress the high priority of the rewarding of recognised breast units in Belgium. Furthermore, a lot of organisations try to be involved in the quality control. Care providers and peers, patient organisations, media, the social security and the government (KCE) all claim their position. Because results and interpretation are difficult and of the highest importance, professional organisations such as the BSMO must take the lead in this process.

CALL TO THE READERS

A lot of process indicators were identified for systemic treatment for breast cancer by a task force. They include the systemic treatment given to separate subgroups but also try to identify some overuse of treatment and/or diagnostic procedures. We call on all our members to participate in the discussion and to send us all their suggestions. Please fill in the questionnaire which was sent to you about the use of systemic treatment in your hospital, or contact the corresponding author if you have not received this questionnaire.

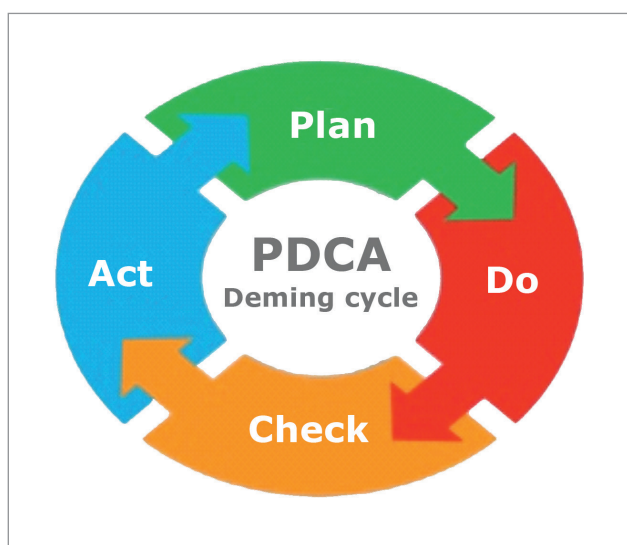


FIGURE 5. Circle of Deming.

(www.healthcatalyst.com/5-Deming-Principels-For-Healthcare-Process-Improvement)

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