

# Breast cancer surgery: Better results with higher case numbers

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Cancer cell during cell division. Credit: National Institutes of Health

In complex surgery, does a correlation exist between the volume of services provided per hospital or per surgeon and the quality of the treatment results? This is the question addressed in eight commissions on

minimum volumes awarded in Germany by the Federal Joint Committee (G-BA) to the Institute for Quality and Efficiency in Health Care (IQWiG). The IQWiG report is now available for the fourth indication investigated, the surgical treatment of breast cancer.

According to the findings, a positive correlation exists between the volume of services provided and the quality of treatment results in the surgical treatment of primary [breast cancer](#): In hospitals with larger case numbers and with medical teams who perform many [breast cancer](#) operations, the overall survival chances are higher for [breast cancer patients](#) who underwent surgery. In addition, further surgery on the operated breast is less common.

## **Breast cancer is the most common cancer in women**

At around 69,000 new cases per year, breast cancer is the most common cancer in women in Germany. In rare cases, breast cancer can also occur in men (about 1% of all new cases). The relative 10-year survival rate in 2016 was 82% for women and 72% for men.

In 2014, doctors performed 74,224 surgical procedures due to a suspected diagnosis of breast cancer in 817 hospitals throughout Germany. In general, a distinction can be made between the surgical treatment of breast cancer, which involves a breast-conserving procedure, and breast removal. The choice of treatment depends not only on the characteristics of the tumour but also on the individual physical, psychological and social situation as well as on age, concomitant diseases and patient preferences.

In Germany, there is currently no binding minimum volume for hospitals with regard to surgical procedures for the treatment of breast cancer. The German Cancer Society, however, requires minimum case numbers as part of its certification system for breast centres. For example, at least

100 primary cases per centre and 50 breast cancer operations per surgeon and year are required as proof of certification as a breast centre. In 2018, 280 sites were certified as breast centres, in which 55,715 primary cases were treated.

## **Positive correlation between volume and quality**

On the basis of 10 studies included in the assessments, IQWiG sees a positive correlation between the volume of services provided and the quality of treatment results for the surgical treatment of breast cancer. Above all, the IQWiG researchers state in their report that a lower overall mortality rate can be assumed if such procedures are performed more frequently; the same applies to disease-related mortality. Correlations between the case numbers and mortality can be derived for both the hospital and surgeon level.

Likewise, for both levels, they conclude that with an increasing number of breast cancer operations, the number of follow-up operations that may become necessary decreases.

The IQWiG researchers were unable to identify any meaningful studies investigating the correlation between the volume of services and the quality of treatment results with regard to other outcomes such as "adverse effects of the therapy", "local recurrences", "disease-free survival" and "health-related quality of life".

Likewise, there are no meaningful studies investigating the effects of specific minimum case numbers introduced into health care.

## **Process of report production**

In December 2018, the Federal Joint Committee (G-BA) commissioned

IQWiG to prepare the report on the correlation between the volume of services and the quality of treatment results in the surgical treatment of primary breast cancer in an accelerated procedure as a so-called rapid report. Interim products were therefore not published or made available for a hearing. The work on this rapid report started in April 2019 and after completion it was sent to the contracting agency, the G-BA, in January 2020.

**More information:** An English extract of this rapid report will be available soon. If you would like to be informed when it is published, please contact [info@iqwig.de](mailto:info@iqwig.de)

Provided by Institute for Quality and Efficiency in Health Care

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