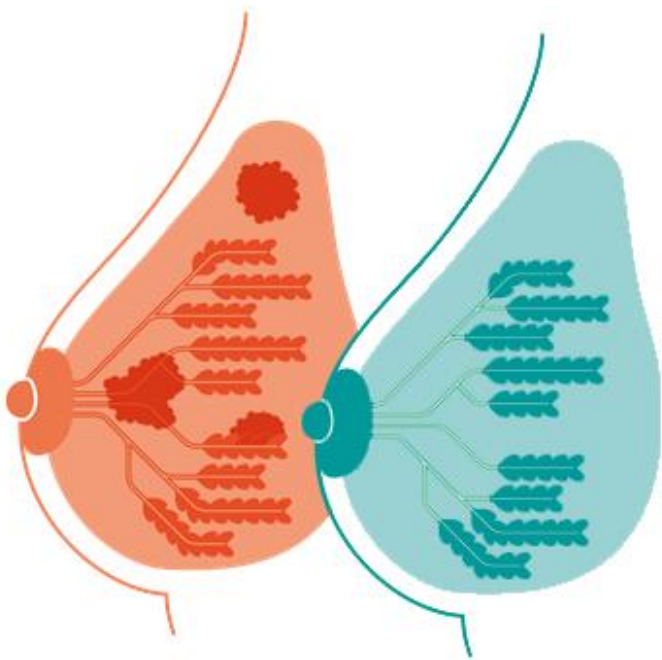


# BREAST CANCER

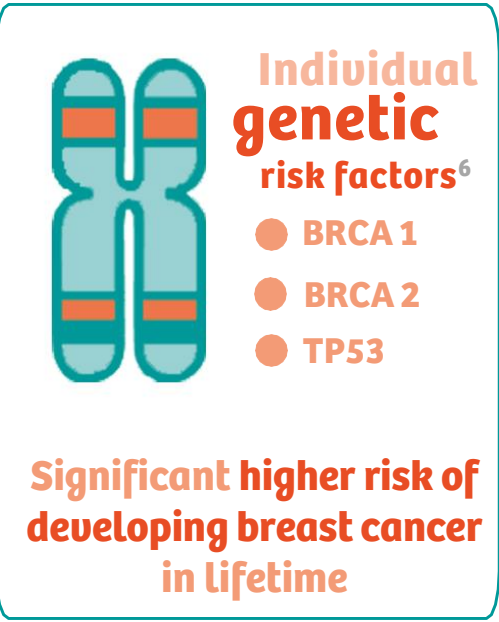
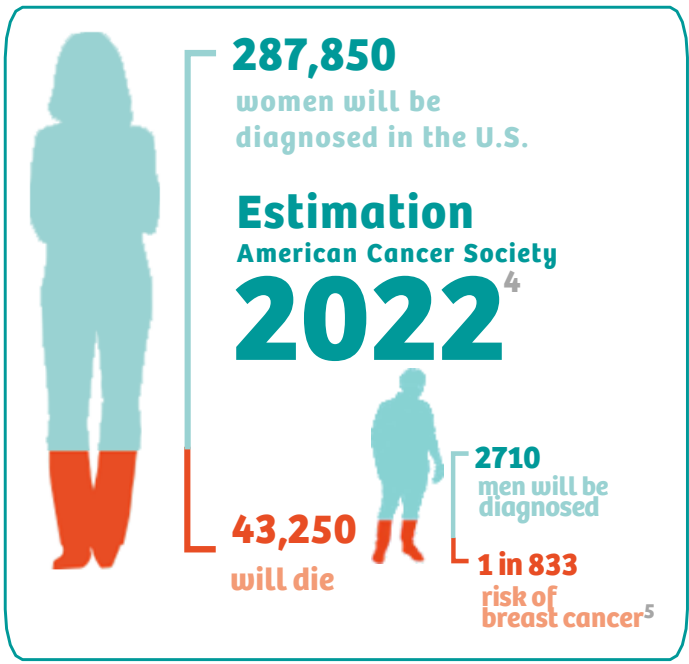
## FACTS AND FIGURES

**SYMPTOMS INCLUDE<sup>1</sup>**  
**LUMP IN THE BREAST**  
**THICKENING/SWELLING OF PART OF THE BREAST**  
**NIPPLE DISCHARGE OTHER THAN BREAST MILK**  
**IRRITATION OR DIMPLING OF BREAST SKIN**  
**CHANGE IN SIZE OR SHAPE OF BREAST**  
**REDNESS**  
**PAIN**



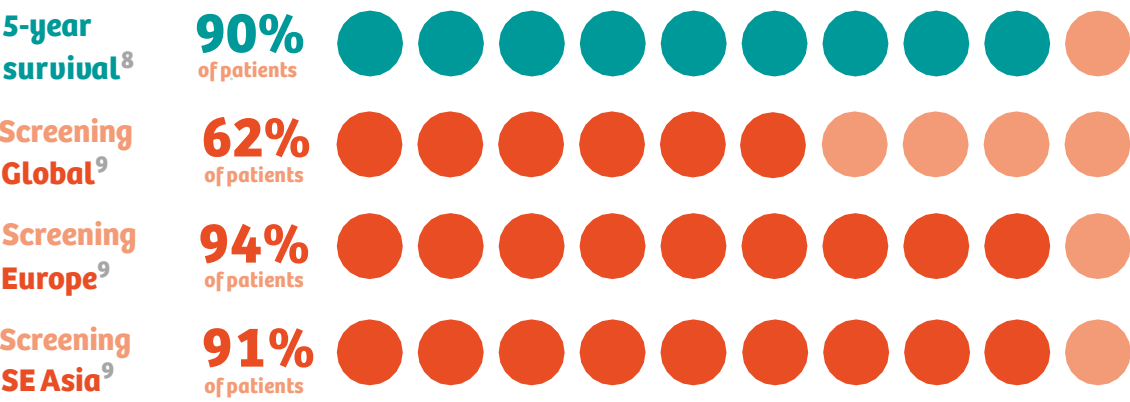
**Breast cancer**  
Is the leading cause of  
**cancer death**  
for women in 110 countries<sup>2</sup>

**19 million** prevalent cases of female  
breast cancer worldwide in 2019<sup>3</sup>



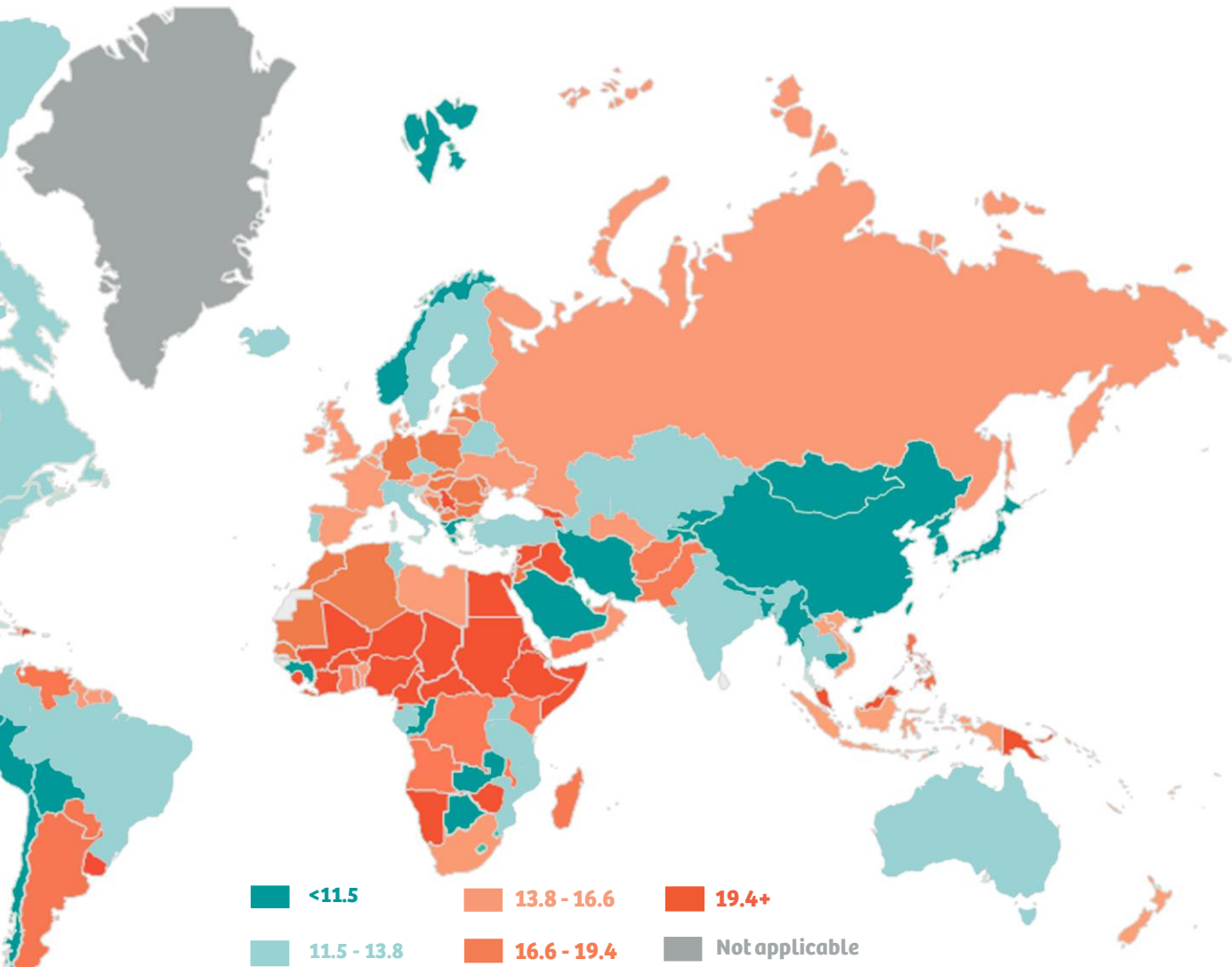
### Breast cancer median cost for care in the EU<sup>7</sup>

Stage 1	9215 EUR
Stage 2	13019 EUR
Stage 3	15511 EUR



**Breast  
cancer  
mortality rate  
per 100,000 females  
2020<sup>10</sup>**

**Disclaimer:**  
This publication on the breast cancer pathway framework was updated on 08.09.2022. It cannot be taken as a recommendation for the readers, especially not as a guideline for treatment, and it is not a medical document. There is no guarantee for completeness or global correctness, the various pain points, solutions, and statistical data are examples only. Sources are multiple, such as public statistics, expert opinions, open innovation workshops, research, own data and many more (see references).  
The products and features mentioned may not be available in all countries and their future availability cannot be guaranteed. Some products mentioned are planned and under development.



1. Cancer research UK. (2020, September 05). Breast cancer symptoms. Retrieved September 6, 2022, from <https://www.cancerresearchuk.org/about-cancer/breast-cancer/symptoms>  
2. Sung, H., Ferlay, J., Siegel, R. L., Laversanne, M., Soerjomataram, I., Jemal, A., & Bray, F. (2021). Global cancer statistics 2020: Globocan estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA: A Cancer Journal for Clinicians, 71(3), 209–249. <https://doi.org/10.3322/caac.21660>  
3. Viz Hub. (2019). Global prevalence of Breast cancer in Female. Retrieved September 6, 2022, from <https://vizhub.healthdata.org/gbd-cancers/>  
4. American Cancer Society. (2022, January 12). Key statistics for breast cancer. Retrieved September 6, 2022, from <https://www.cancer.org/cancer/breast-cancer/about/how-common-is-breast-cancer.html>  
5. Breast Cancer Org. (2022, July 14). Breast cancer facts and statistics. Retrieved September 6, 2022, from <https://www.breastcancer.org/facts-statistics>  
6. American Cancer Society. (2021, December 16). Breast cancer risk factors you cannot change. Retrieved September 6, 2022, from <https://www.cancer.org/cancer/breast-cancer/risk-and-prevention/breast-cancer-risk-factors-you-cannot-change.html>  
7. Brandão, M., Morais, S., Lopes-Conceição, L., Fontes, F., Araújo, N., Dias, T., Pereira, D., Borges, M., Pereira, S., & Lunet, N. (2020). Healthcare use and costs in early breast cancer: A patient-level data analysis according to stage and breast cancer subtype. ESMO Open, 5(6). <https://doi.org/10.1136/esmoopen-2020-009884>  
8. American Cancer Society. (2022, March 1). Breast Cancer survival rates. Retrieved September 6, 2022, from <https://www.cancer.org/cancer/breast-cancer/understanding-a-breast-cancer-diagnosis/breast-cancer-survival-rates.html>  
9. World Health Organization. (2020, March 17). Assessing national capacity for the prevention and control of non-communicable diseases. Retrieved September 6, 2022, from <https://www.who.int/publications/i/item/ncid-csc-2019>  
10. Viz Hub. (2019). Breast cancer deaths per 100,000. Retrieved September 6, 2022, from <https://vizhub.healthdata.org/gbd-compare/>



An extensive research-based analysis from 40+ scientific articles and journals in combination with hospital workflow experience allowed the identification of pain points and solutions.

These solutions were proposed based on AI, IoMT, AR/VR, biosensors, nanorobotics and smart wearable technologies.

THROUGH THIS CAREPLAN WE HIGHLIGHT DATA FROM A COLLECTION OF

64 painpoints

80 solutions

18 connected to different stakeholders

Solution categories

- Existing in healthcare sector
- Ongoing research in healthcare
- Futuristic solution (may or may not be implemented)

Disclaimer: This publication on the breast cancer pathway framework was updated on 10.09.2022. It cannot be taken as a recommendation for the readers, especially not as a guideline for treatment, and it is not a medical document. There is no guarantee for completeness or global correctness, the various pain points, solutions, and statistical data are examples only. Sources are multiple, such as public statistics, expert opinions, open innovation workshops, research, own data and many more (see references). The products and features mentioned may not be available in all countries and their future availability cannot be guaranteed. Some products mentioned are planned and under development.

"MAMMOMAT Revelation (SHS): May not be available for sale in all markets. "MAMMOVISTA B.smart (SHS): It is not commercially available in all countries. Due to regulatory reasons its future availability cannot be guaranteed. The AI feature is an option and available with MAMMOVISTA B.smart. Transpara® Powered by FusionAI, ScreenPoint Medical.

Website: https://www.siemens-healthineers.com/careers/innovation-think-tank

