Atención Primaria

SCIENTIFIC LETTER

Delays and inequalities in breast cancer in Meta Colombia (2017–2023): A cross-sectional study

Demoras y desigualdades en cáncer de mama en el meta colombia (2017-2023): un estudio transversal

Cesar Garcia-Balaguera [a,*], Mery Gireth Vargas [b], David Guzmán [b], Sandra Patricia Ruiz Rodriguez [c]

[a] Profesor Facultad de Medicina, Universidad Cooperativa de Colombia-Sede Villavicencio, Colombia
[b] Investigadores Facultad de Medicina Universidad Cooperativa de Colombia, Colombia
[c] Enfermera, Referente Cáncer Secretaría de Salud del Meta, Colombia

Breast cancer is a major public health concern and is currently the leading type of cancer among women. In 2022, 2,295,720 cases were reported globally, with 665,675 deaths. In Colombia, 17,018 cases were reported in 2022, with an incidence of 64.9 per 100,000 women, resulting in 4752 deaths.[1]

Breast cancer significantly impacts society and health systems, prompting the development of increasingly refined strategies for early diagnosis and timely treatment initiation to improve patients' survival and quality of life. These programs should facilitate barrier-free access to diagnostic protocols and early treatment for risk factors, masses (whether painful or not), secretions, and pain.[2]

This study aimed to describe the epidemiology of breast cancer in the Department of Meta, Colombia; identify the associated risk factors; assess adherence to management protocols; and identify barriers to service access.

This retrospective descriptive study employed a quantitative approach and included confirmed cases of breast cancer reported through the National Epidemiological Surveillance System (SIVIGILA) in the Department of Meta, Colombia, from 2017 to 2023. Risk factors were analyzed. Multinomial logistic regression analysis was employed to explore possible risk associations and determine the magnitude and relationships between variables. The Chi-square test was used to establish the significance of the association of risk with odds ratio (OR) values. The study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki and with Resolution 8430 of 1993 of the Colombian Ministry of Social Protection. The study was approved by the institutional Bioethics subcommittee.

The results found indicate that year with the highest incidence during 2017–2023 was 2019 ($14.73 \times 100,000$) and a subsequent significant decrease in incidence is evident. The majority of the cases originated from urban areas (83.73%), whereas 16.27% were from rural areas.

* Corresponding author.
E-mail address: cesar.garcia@campusucc.edu.co
(C. Garcia-Balaguera).

Table 1 Bivariate analysis of possible factors associated with delay.

| | | Meta breast cancer delays | | |
| | | | Delay | |
Variable	Risk factor	OR	CI	*P*-value
Sociodemographic characteristics				
Age (years)	<55	**1.32**	**0.72–2.43**	**0.007**
Social stratum	Low stratum	**1.72**	**1.028–2.702**	**0.000001**
Area of residence	Rural	**3.73**	**1.7–7.76**	**0.000001**
Social security health insurance affiliation	Subsidized scheme (low income)	**2.3**	**1.62–3.27**	**0.000001**
Cancer characteristics				
Histological type	Ductal	0.19	0.12–0.31	0.0025
Histological grade	Infiltrating	**4.56**	**1.35–15.43**	**0.000001**
Reason for consultation	Mammography	**3.13**	**1.68–5.83**	**0.00001**

Source: Own elaboration.

Overall, 21.03% of the patients experienced treatment delays. Of the delays, 39.9% were patient-related (>60 days between the symptom onset and first consultation [average: 125.7 days]), 18.6% were attributed to pathology providers (>15 days in the delivery of the biopsy result [average: 29 days]), and 20.12% were because of the Health insurance companies not authorizing treatment in a timely manner (≥45 days [average: 164 days].

Prevalence OR values were calculated to estimate the possible association between cases with delay and sociodemographic characteristics, type of cancer, and process of care, indicating age < 55 years (OR 1.32), low social stratum (OR 1.72), living in a rural area (OR 3.73), affiliation with subsidized health regime (OR 2.3), infiltrating histological grade (OR 4.56), and positive mammography finding (OR 3.1) as risk factors for delay (Table 1).

The evidence is consistent with the results of the present study and highlights the substantial disparities in access to health services in the Colombian health system, particularly the impacts of poverty and rural living conditions that exacerbate delays because of inequitable healthcare access.

This study identified delays exceeding 35 days for insured people in Colombia to authorize mammography and biopsy. The administrative delays are unacceptable in a system that ostensibly provides full coverage for these conditions. However, the present study observed delays in all these areas, necessitating immediate implementation of primary care strategies in rural and dispersed areas and among low-income individuals.[3,4]

This is necessary for a substantial improvement in eliminating economic, social, and administrative barriers to health system access, which is crucial for improving cancer survival in Colombia.[5,6] In addition to some challenges that are important to strengthen, such as intersectoral and interinstitutional coordination that allow establishing strategies for cancer control within the health promotion and maintenance routes and the care routes for the cancer risk group.

Authors' contributions

César García-Balaguera: Idea, protocol development, data capture, univariate and multivariate data analysis, table design, article development.

Mery Vargas, David Guzmán, Sandra Ruiz: data capture, univariate and multivariate data analysis.

References

1. Ferlay J, Laversanne M, Ervik M, Lam F, Colombet M, Mery L, et al. Global cancer observatory: cancer tomorrow. Lyon, France: International Agency for Research on Cancer; 2024. Available from: https://gco.iarc.fr/tomorrow [accessed 13.2.24].
2. Srinath A, van Merode F, Vasudeva Rao S, Pavlova M. Barriers to cervical cancer and breast cancer screening uptake in low- and middle-income countries: a systematic review. Health Policy Plan. 2023;38:509–27, http://dx.doi.org/10.1093/heapol/czac104.
3. Trapani D, Ginsburg O, Fadelu T, Lin NU, Hassett M, Ilbawi AM, et al. Global challenges and policy solutions in breast cancer control. Cancer Treat Rev. 2022;104:102339, http://dx.doi.org/10.1016/j.ctrv.2022.102339.
4. Huppert LA, Mariotti V, Chien AJ, Soliman HH. Emerging immunotherapeutic strategies for the treatment of breast cancer. Breast Cancer Res Treat. 2022;191:243–55, http://dx.doi.org/10.1007/s10549-021-06406-1.
5. Decker T, Schmidt M. New opportunities in advanced breast cancer. Oncol Res Treat. 2022;45:1–3, http://dx.doi.org/10.1159/000521414.
6. Garcia-Balaguera C, Vargas Martínez M, Guzmán Arbelaez D, Fernandez V. Maternal mortality, health determinants, and Covid-19 in the Department of Meta, Colombia: a cross-sectional study. Open Public Health J. 2024;17, http://dx.doi.org/10.2174/0118749445277442240220101010, e18749445277442.