

# DID GENDER HEALTHCARE DISPARITY AGAINST WOMEN EXIST IN CHILE DURING THE FIRST TWO YEARS OF THE PANDEMIC?

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## BACKGROUND

Gender disparity has been a priority for many years. In March 2020 the World Health Organization reported that almost 90% of men/women globally are biased against women<sup>1</sup>. In 1997, the Chilean government developed a Women's Health plan<sup>2</sup>, to address the main health issues such as fertility, sexual education and breast cancer. Also, Roche has developed a global initiative (XProject<sup>3</sup>) to address these disparities. This study aims to know if, in Chile, gender disparity is a infuencing factor involved in the pathogenesis, diagnosis, and prognosis of 4 main cancer, during 2020 and 2021, considering that 51% of the Chilean population are women and 49% are men. Previous study<sup>4</sup> explored gende r disparities in access to care during the pandemic in Chile confirming the decline in diagnosis for conditions such as cardiovascular and cancer, suggesting delayed effects in severity and mortality.

## METHODS

Year 2020 and 2021, mortality and hospital discharge databases from the Statistics and Health Information Department (DEIS) of the Chilean Ministry of Health<sup>5</sup> were used to evaluate if there is a difference between mortality and hospital discharge to identify the three most important conditions for the Chilean population, in terms of quantity. These databases used International Statistical Classification of Diseases and Related Health Problems, 10th revision (ICD-10). The year 2020 and 2021 were analyzed because:

- The data was completed in all sources.
- To have comparable data because COVID-19 policies were similar during those years.

Descriptive statistics was used for this analysis.

	Covid-19		Cáncer		Cardiovascular diseases	
	2020	2022	2020	2022	2020	2022
Women	9.598	12.446	13.005	12.833	13.644	14.320
Men	12.564	15.495	14.099	14.111	14.048	14.785

Figure 1: Main mortality drivers by gender during 2020 and 2021

## RESULTS

From this analysis, we obtained that during 2020 and 2021 the three leading causes of mortality in Chile were cardiovascular diseases, COVID-19, and cancer. In terms of hospital discharge the same three conditions were the most frequent. The top three causes were the same in women and men. However, the order of each condition was different. For women, cardiovascular diseases were the top 1, then cancer and COVID-19. For men, the top one was COVID-19, then cardiovascular diseases and cancer (Figure 1). Regarding hospital discharge in both years, just considering cancer more women were discharged than men in cancer. However, for cardiovascular diseases and COVID-19, the data was different and it is related that more men experienced these diseases compared to women (Figure 2).

Hospital Discharge					
2020	Women	Men	Total	Women rate	Men rate
Cancer	36.669	30.679	67.348	54%	46%
Cardiovascular diseases	6.967	12.830	19.797	35%	65%
Covid-19	1.185	12.830	14.015	8%	92%
2021	Women	Men	Total	Women rate	Men rate
Cancer	42.116	2.304	44.420	95%	5%
Cardiovascular diseases	7.819	12.949	20.768	38%	62%
Covid-19	2.304	5.918	8.222	28%	72%

Figure 2: Hospital discharge by gender during 2020 and 2021

In terms of the three most frequent cancer causes of mortality, stomach and colon cancer are the most frequent in both gender, and prostatic cancer for men and breast cancer for women (Figure 3a, 3b and Figure 4)

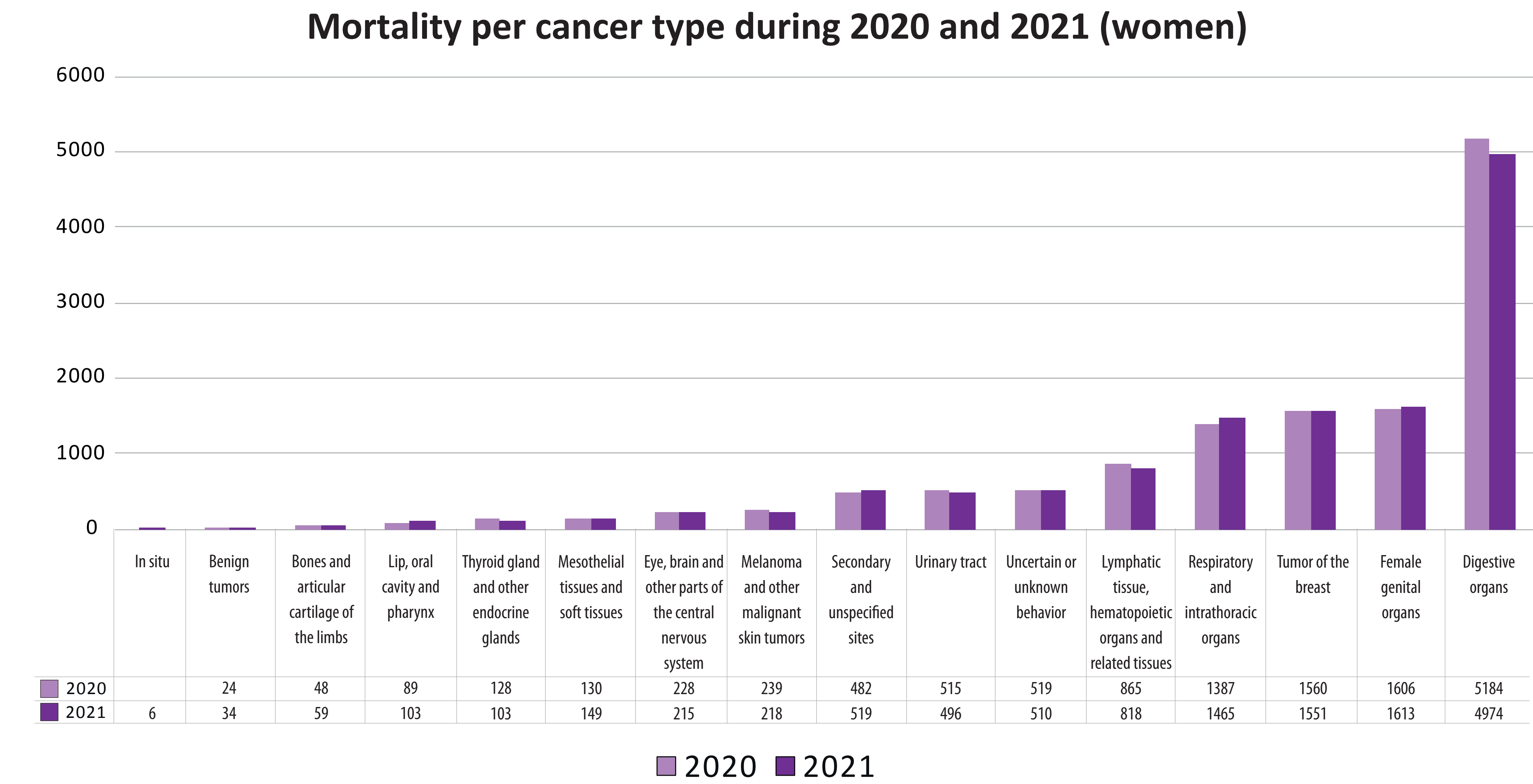


Figure 3a. Mortality by cancer type (Women)

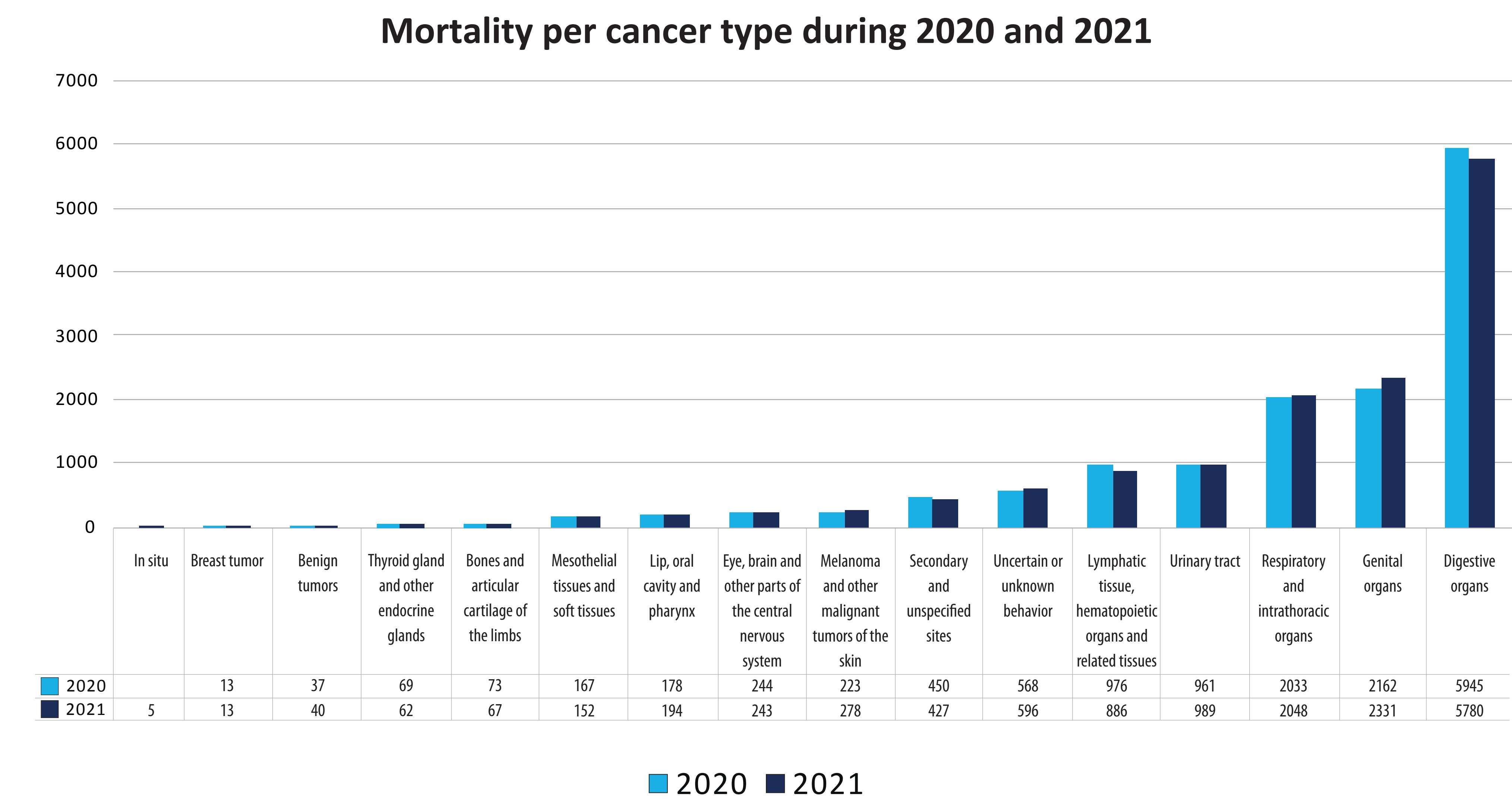


Figure 3b. Mortality by cancer type (Men).

		/100,000 inh				%	
Colon Cancer		2020	2021	2020	2021	2020	2021
Women	1064	1093	0,0547	0,0555	0,0055%	0,0056%	
Men	1059	1125	0,0544	0,0572	0,0054%	0,0057%	

		/100,000 inh				%	
Stomach Cancer		2020	2021	2020	2021	2020	2021
Women	1008	960	0,0518	0,0488	0,0052%	0,0049%	
Men	2042	1822	0,1049	0,0926	0,0105%	0,0093%	

		/100,000 inh				%	
Colon Cancer		2020	2021	2020	2021	2020	2021
Men	2011	2210	0,1033	0,1123	0,0103%	0,0112%	

		/100,000 inh				%	
Breast cancer		2020	2021	2020	2021	2020	2021
Women	1560	1551	0,0802	0,0788	0,0080%	0,0079%	

Figure 4. Mortality by cancer type (Men). Percentage of all death cause by cancer

## DISCUSSION

From this analysis, we obtained that during 2020 and 2021 the three leading causes of mortality were cardiovascular diseases, COVID-19, and cancer. The top three causes were the same in women and men. However, the order of each condition was different, which could be related to the difference in some behavioral factors. This For women, cardiovascular diseases were the top 1, then cancer and COVID-19. For men, the top one was COVID-19, then cardiovascular diseases and cancer. The reason for disparities are still being investigated, some factors could be analyzed include men's higher likelihood of having underlying health conditions, such as heart disease and diabetes, which increase their vulnerability to severe illness from COVID-19. Additionally, men may be less likely to seek medical care or comply with public health measures, such as wearing masks and getting vaccinated, which can lead to higher rates of infection and worse outcomes<sup>6,7,8,9</sup>. Taking into account that prostate cancer is a disease of relatively slow progression and with several screening options, other factors could be associated to delayed healthcare. Regarding hospital discharge in both years, more women were discharged than men in cancer. However, for cardiovascular diseases and COVID-19, the data was different and it is related that more men experienced these diseases compared to women. It is important to highlight that this study is circumscribed to mortality and more specifically in cancer related deaths, however healthcare disparities has a broader spectrum and complexities that implies variables as discrimination and stigma in patient or health care provider, substandard care based on personal beliefs or biases, lack of effective and assertive communication, differential access to insurance and coverages, time spent in unpaid responsibilities, delayed medical care for caregiver roles, differential access to decision making roles in healthcare among others.

## CONCLUDING REMARKS

Based on this analysis, we cannot conclude that there are healthcare gender disparities against women in Chile, because the difference in terms of mortality or hospital discharge could be related to other causes (i.e. social behavior, health awareness). However, in cancer, we see some disparities. There are more governmental guarantees for specific women's cancer than for the disease that affect general population. Therefore, it is essential to advance regarding general population cancer funds and public health awareness campaigns to reduce the mortality of some preventable diseases.

## References

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