

## THE INCIDENCE OF RARE TUMORS IN CUIABÁ, MATO GROSSO STATE, BRAZIL

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### INTRODUCTION

Rare tumors are considered a challenge for clinical practice as well as for epidemiology and public health. The scarcity of epidemiologic information on this subject in Brazil reinforces the importance of developing studies that describe the prevalence of rare cancers and identify their causes and the best approach for their prevention, detection, and treatment, since they also represent a public health problem.

### OBJECTIVE

To evaluate the incidence of rare cancers and to compare the characteristics between rare and common cancers in Cuiabá, Brazil

### METHODS

Data were obtained through the population-based registry of Cuiabá, capital of Mato Grosso state, Brazil, between 2001 and 2018. Rare cancers were defined according to the list made by RARECARE (as a combination of topographical and morphological codes of the ICD-O-3) based on the criterion of rare cancers having a crude annual incidence lower than 6/100,000/year.

Crude incidence rates were calculated as the number of all cancers occurring divided by the overall population at risk. Incidence by age, age-adjusted incidence rates, and the proportion of rare and common cancers were also calculated.

### RESULTS

Between 2001 and 2008, 25.6% of tumors were considered rare in Cuiabá. The mean annual incidence of all cancers was 487.6 per 100,000, and the incidence of rare tumors was 124.8 per 100,000 (Table 1). Rare tumors were predominant in the age groups up to 40 years.

### KEYWORDS

Rare tumors, Incidence, Population-based registry, Brazil .

Table 1: . Number of cases, incidence rate and incidence distribution of rare and common cancer in Cuiabá, MT, Brazil

Type of cancer	N	%	Incidence rate per 100.000
Rare	12450	25.6	124.8
Common	21445	44.1	215.0
Other	14736	30.3	147.7
Total	48631	100.0	487.6

Source: The authors (2023)

### DISCUSSION AND CONCLUSIONS

Rare tumors represent a relevant percentage of cancer cases (25.6%) in the city of Cuiabá, which is close to the percentage observed in Europe (22% - 1995-2002), in Italy (25% - 2000-2010), in São Paulo, Brazil (20.4% - 1997-2012), the USA (20% -2009-2013), and higher than Japan (15%: 1998-2007). Regarding age, rare tumors were predominant in young people, under 40 years old in Cuiabá, while they were predominant in young people under 35 years old in Europe, Italy, Japan, and in young people under 24 years old in São Paulo. An estimated incidence of around 12,500 (124.8 per 100,000/year) of new rare cases diagnosed annually in Cuiabá. The present study showed the magnitude of the burden of rare tumors in Cuiabá, Brazil, which may contribute to the study of these entities for a more effective diagnostic and therapeutic approach in Brazil.

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### ACKNOWLEDGMENTS