

Rare Head and Neck cancers in Brazil

Rejane de Souza Reis¹, Nathalie V. Balman², Marcell de Oliveira Santos³, Beatriz de Camargo², Max Moura de Oliveira⁵, Diego Rodrigues Mendonça e Silva⁵, Gemma Gatta⁴, Luiz Paulo Kowalski⁵, Maria Paula Curado⁵

¹ Hospital Fundação do Câncer, Rio de Janeiro, RJ; ² Research Center, Post-graduate program, Instituto Nacional de Câncer, Rio de Janeiro, RJ; ³ Surveillance and Prevention Coordination, Instituto Nacional de Câncer, Rio de Janeiro, RJ; ⁴ Instituto Nazionale di Tumori, Milan, Italy; ⁵ A.C. Camargo Cancer Center, Sao Paulo, SP

1. BACKGROUND

In Europe, some 22% of incident cancers cases are rare cancers, and their incidence is increasing (Van Dijk et al, 2012). Bustamante et al. (2019) reported that approximately 127,988 rare cancers were diagnosed in Sao Paulo, Brazil from 1997 to 2012. The authors did not distinguish H&N cancers from other rare cancers. The epidemiological profile of rare H&N cancers in Brazil has not been described yet. Here, we sought to describe the incidence of rare head and neck (H&N) cancers based on incidence data of the Brazilian population-based cancer registries.

2. METHODS

Incidence data were obtained from 16 population-based cancer registries (PBCR) covering the five geographic regions of Brazil. The H&N cancers included was based in morphology and topography codes and selected according with RARECAREnet. It was calculated the crude incidence rates by age, the proportion of cases by age and topography.

3. RESULTS

Between 2005 to 2014, it was registered 22,758 rare head and neck cancers in 19 PBCR. The incidence rates varies according to age and Brazilian Regions. Larynx cancer has the highest incidence rates (5.04/100,000) followed by Oropharynx (3.87/100,000). All tumors were more common in men than in women especially in Midwest and South region.

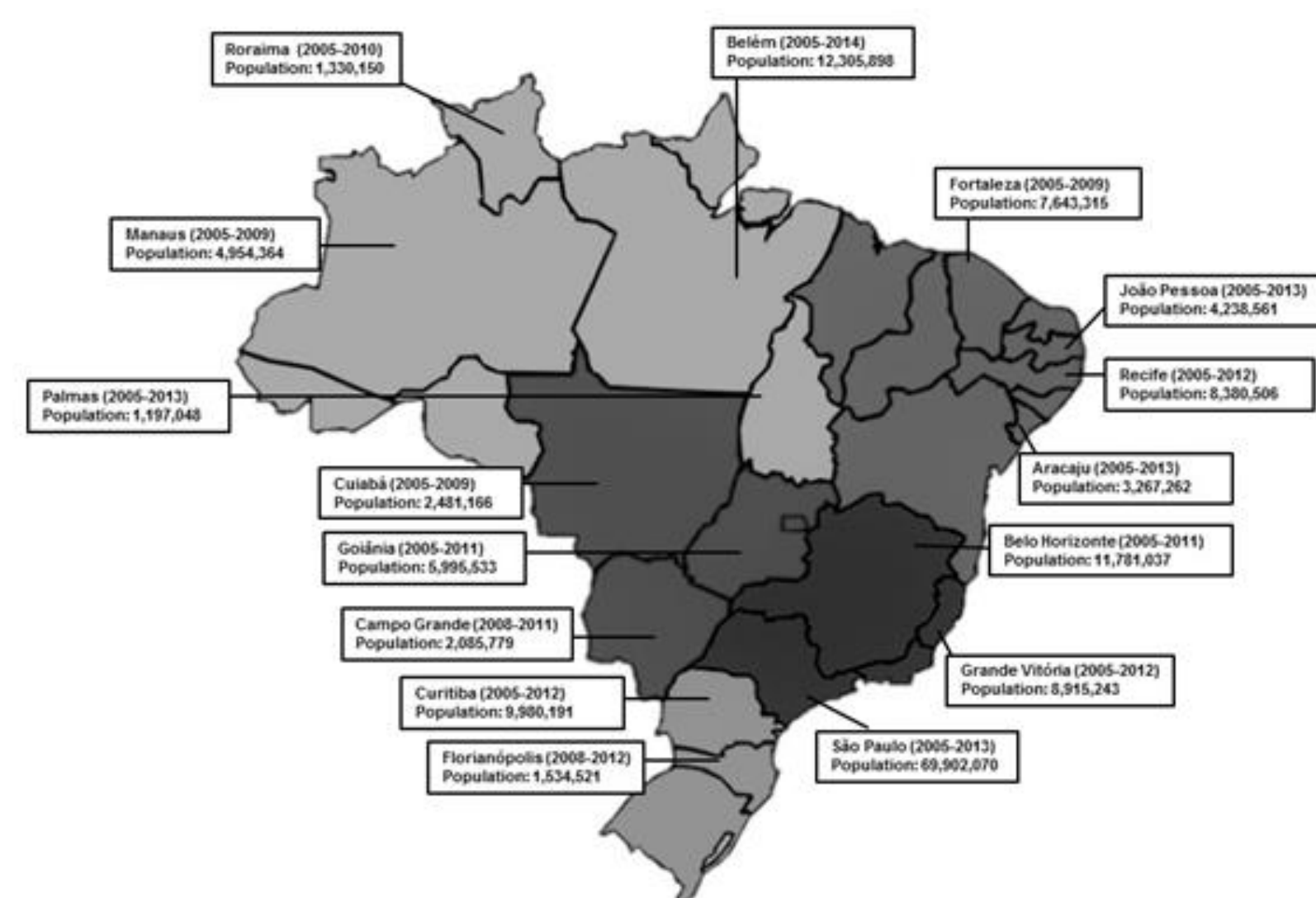


Figure 1. Geographic regions of Brazil and PBCRS location

Table 1. Proportional distribution of specified head and neck cancers diagnosed from 2005–2014, according to PBCR, and Brazilians regions in Brazil *

Region	PBCR	Nasal cav and sinus		Nasopharynx		Major saliv glands		Larynx		Oropharynx		Oral cav and lips		Eye and adnexa		Middle ear	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
North	Belém (2005-2014)	8	22.9	16	29.1	19	27.1	88	25.1	47	19.0	35	12.3	12	31.6	1	20.0
	Manaus (2005-2009)	3	37.5	3	12.0	4	20.0	50	24.3	24	19.7	20	19.2	0	0.0	0	0.0
	Palmas (2005-2013)	0	0.0	0	0.0	4	40.0	1	3.8	4	19.0	1	10.0	0	0.0	0	0.0
	Roraima (2005-2010)	1	33.3	0	0.0	1	50.0	8	34.8	4	26.7	0	0.0	0	0.0	0	0.0
Northeast	Aracaju (2005-2013)	2	20.0	2	7.4	1	3.0	14	8.4	5	5.4	4	3.0	0	0.0	0	0.0
	Fortaleza (2005-2009)	7	21.9	3	6.4	9	10.8	57	13.8	19	7.1	33	10.6	4	28.6	0	0.0
	João Pessoa (2005-2013)	6	42.9	4	23.5	10	22.2	47	19.8	24	15.5	38	17.0	0	0.0	0	0.0
	Recife (2005-2012)	8	21.6	9	14.8	14	18.2	90	18.9	44	14.5	57	17.0	0	0.0	0	0.0
Midwest	Campo Grande (2008-2011)	2	28.6	3	42.9	2	6.9	22	17.6	13	15.9	13	14.0	2	7.1	0	0.0
	Cuiabá (2005-2009)	5	35.7	1	9.1	1	9.1	11	10.8	8	8.4	4	4.2	1	50.0	0	0.0
	Goiania (2005-2011)	2	7.1	2	2.7	3	4.9	16	5.4	10	3.7	9	2.9	0	0.0	0	0.0
Southeast	Belo Horizonte (2005-2011)	14	20.3	9	9.9	18	12.6	119	15.2	60	9.9	54	9.6	5	15.2	0	0.0
	Grande Vitória (2005-2012)	6	16.7	8	14.8	11	28.6	84	22.6	49	12.1	43	14.3	1	33.3	0	0.0
	São Paulo (2005-2013)	116	35.3	65	17.9	241	25.8	458	13.2	483	17.7	573	40.5	137	58.8	29	96.7
South	Curitiba (2005-2012)	4	8.9	11	19.3	9	7.4	91	15.9	50	11.6	38	10.4	2	28.6	0	0.0
	Florianópolis (2008-2012)	0	0.0	2	7.7	5	9.3	11	9.1	4	5.1	13	17.1	1	50.0	0	0.0
TOTAL		184	26.1	138	14.6	352	19.9	1167	14.5	848	13.5	935	19.2	165	36.5	30	75.6

* Time periods examined varied among PBCRs.

Table 2. Crude Incidence rates of rare head and neck cancer by topography in 5 regions of Brazil, from 2005–2014.

Tumor Group	n	North			Northeast			Midwest			Southeast			South			Brazil		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Nasal cavity and sinus	704	0.29	0.16	0.23	0.49	0.33	0.40	0.50	0.41	0.46	0.60	0.38	0.48	0.72	0.36	0.53	0.54	0.34	0.43
Nasopharynx	948	0.50	0.35	0.42	1.00	0.36	0.64	1.12	0.46	0.77	0.87	0.31	0.57	1.22	0.41	0.79	0.89	0.34	0.60
Major salivary glands	1774	0.70	0.29	0.48	1.15	0.92	1.02	1.13	0.83	0.97	1.35	1.12	1.22	2.03	1.35	1.67	1.25	0.96	1.10
Minor salivary glands	739	0.26	0.38	0.32	0.72	0.54	0.62	0.51	0.51	0.51	0.46	0.41	0.43	0.60	0.44	0.51	0.49	0.44	0.46
Larynx	8049	5.68	1.00	3.22	10.32	1.56	5.48	8.98	1.47	5.00	9.42	1.48	5.15	11.36	1.62	6.17	9.24	1.43	5.04
Oropharynx	6257	3.35	0.90	2.09	6.15	1.33	3.49	7.45	1.23	4.16	7.25	1.53	4.17	8.27	1.15	4.48	6.78	1.36	3.87
Oral cavity and lips	4888	2.49	1.46	1.96	6.45	2.42	4.22	7.54	2.04	4.62	2.89	2.36	2.60	6.09	2.02	3.92	4.22	2.20	3.14
Eye and adnexa	452	0.33	0.18	0.25	0.29	0.11	0.19	0.47	0.77	0.63	0.29	0.30	0.29	0.14	0.03	0.08	0.30	0.27	0.29
Middle ear	41	0.03	0.01	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.03	0.03	0.03	0.02	0.03	0.02	0.02	0.02	0.02
Head and Neck	23,852	10.82	4.99	7.92	19.40	5.47	11.70	21.25	6.13	13.24	17.48	7.56	12.15	20.58	4.50	12.02	17.52	6.53	11.64

Table 3. Quality indicators for data pertaining to rare head and neck cancers diagnosed from 2005–2014 in Brazil, as presented by 16 population-based cancer registries (PBCR).

Region	PBCR	n	DCO%	MV%	NOS	
					n	%
North	Belém	1131	0.0	90.5	226	20.0
	Manaus	512	0.0	81.3	104	20.3
	Palmas	76	2.6	90.8	10	13.2
	Roraima	47	0.0	100.0	14	29.8
Northeast	Aracaju	498	0.0	100.0	28	5.6
	Fortaleza	1203	0.1	98.5	132	11.0
	João Pessoa	724	0.0	90.3	129	17.8
	Recife	1375	0.0	93.4	222	16.1
Midwest	Campo Grande	382	0.0	86.6	57	14.9
	Cuiabá	339	0.0	100.0	31	9.1
	Goiania	1102	0.3	80.1	42	3.8
Southeast	Belo Horizonte	2377	0.0	100.0	279	11.7
	Grande Vitória	1231	0.0	98.1	202	16.4
	São Paulo	9778	1.8	100.0	2102	21.5
South	Curitiba	1645	0.7	100.0	205	12.5
	Florianópolis	385	0.0	100.0	36	9.4

DCO%: Proportion of cases ascertained from death certificate only; MV%: Proportion of microscopically verified cases. NOS: Not Otherwise specified

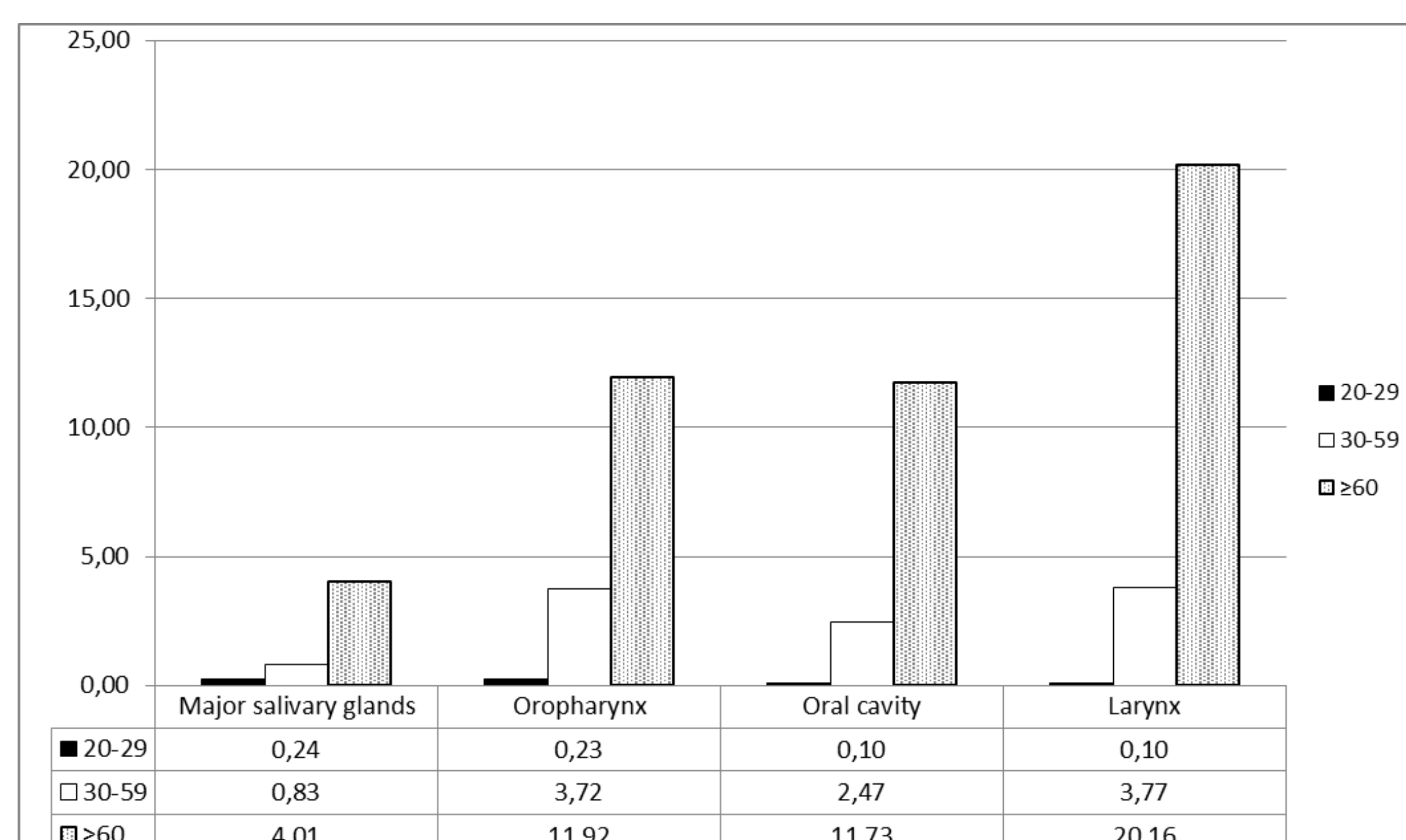


Figure 2. Incidence of rare head and neck cancers in Brazil from 2005–2014, according to site and age group.

4. CONCLUSION

Head and Neck Cancers in Brazil is a rare cancer, however incidence rates by region shows a pattern of high incidence rates for larynx and oropharynx cancers being not so rare in some more developed regions of the country.

4. References

Bustamante-Teixeira MT, Latorre, MDRD, Guerra MR, Tanaka LF, Botta L, Trama A, Gatta, G. Incidence of rare cancers in the city of São Paulo, Brazil. Tumori Journal, 2019.
Van Dijk BA, Gatta G, Capocaccia R, Pierannunzio D, Strojjan P, Licitra L, et al. Rare cancers of the head and neck area in Europe. Eur J Cancer. 2012;48(6):783–96.