

CONFERÊNCIA BRASILEIRA DE

# CÂNCER DE MAMA

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REALIZAÇÃO











#### MODERATELY HYPOFRACTIONATED POST-OPERATIVE RADIATION THERAPY FOR BREAST CANCER: PREFERENCES AMONGST RADIATION ONCOLOGISTS FROM COUNTRIES IN LATIN AMERICA **AND THE CARIBBEAN**

- Breast cancer (BC) is the most prevalent cancer among women in Latin America and the Caribbean (LAC).
- Moderately hypofractionated post-operative radiation therapy (RT) has been shown safe, effective, and cost-saving by reducing treatment duration through fewer sessions.
- Few data is available regarding the practice of moderately hypofractionated postoperative radiation therapy for breast cancer in LAC,

















#### **OBJECTIVES**

- Evaluate current **practice patterns and prescription preferences** for moderately hypofractionated post-operative RT in LAC.
- Assess factors influencing decision-making.
- Identify constraints on the utilization of moderately hypofractionated post-operative RT.

#### **METHODS**

Radiation oncologists from LAC were invited to contribute to this study. A 38-question survey was used to evaluate their opinions.















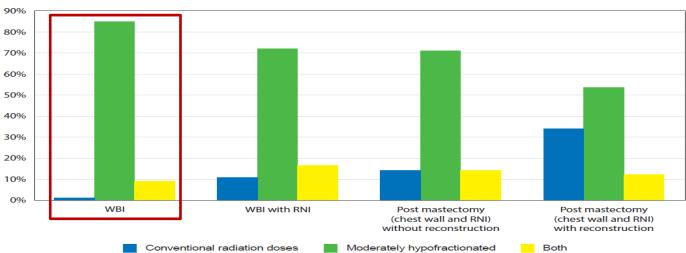




#### Prescription Preferences

Most respondents (84.9%) preferred moderately hypofractionated post-operative RT as their first choice in cases of whole breast irradiation (WBI).

Figure 2. Radiation oncologists and their fractionation preference. WBI — whole breast irradiation; RNI — regional nodal irradiation

















#### > Factors influencing decision-making

Factors that most <u>affected the decision to utilize</u>: percentage of time dedicated to breast cancer, regional nodal irradiation, implant-based breast reconstruction, and patient's age.

Table 2. Medical aspects influencing the decision of radiation oncologists to recommend moderately hypofractionated postoperative radiation therapy schedules

Characteristics	Hypofractionation (n = 146)			(n = 27)	OR (95% CI)	p-value
	N	%	N	%		
Patients number at clinic						
≥ 10 patients	81	44.5	12	52	1.35 (0.57-3.16)	0.488
< 10 patients	65	55.5	13	48		
% Time dedicated to breast cancer						
≤ 50%	114	78	25	96	6.98 (1.10-53.70)	0.031
> 50%	32	22	1	4		
Age group						
≤ 45 years	95	65	13	50	1.86 (0.81-4.32)	0.143
> 45 years	51	35	13	50		
Setting practice						
Public	89	61	16	61.5	0.97 (0.41-2.30)	0.955
Private	57	39	10	38.5		
Academic hospital						
No	123	84	24	92.3	0.44 (0.08-2.00)	0.283
Yes	23	16	2	7.7		
Timing working as radiation oncologist						
< 10years	54	37	9	38.4	1.11 (0.46-2.66)	0.817
≥ 10years	92	63	17	61.6		
Number of radiation oncologists at the service						
1	9	6.3	4	13	0.36 (0.10-1.20)	0.110
>1	132	93.7	27	87		
Academic Institution						
Yes	23	15.7	2	7.7	0.44 (0.09-2.90)	0.283
No	123	84 3	24	923		

Note: The absolute numbers and percentages correspond to the total response obtained in each item. OR — odds ratio; CI — confidence interval

Table 3. Clinical-pathological and financial aspects influencing the decision of radiation oncologists to recommend moderately hypofractionated post-operative radiation therapy schedules

Characteristics	Hypofra	Hypofractionation		ther	OB (05% CI)		
Characteristics	N	%	N	%	– OR (95% CI)	p-value	
Age	114	78.0	12	54	3.01 (1.2–7.2)	0.009	
Breast cancer stage	111	76.0	19	73	1.10 (0.4–3.3)	0.747	
Breast size	111	76.0	18	69	1.41 (0.56–3.21)	0.461	
Tumour side (right or left)	135	92.5	23	88	1.60 (0.41–6.19)	0.491	
Breast cancer molecular subtype	131	89.7	22	85	1.59 (0.41–5.23)	0.444	
Tumor grade	126	86.3	22	84	1.15 (0.35–3.5)	0.819	
Surgical margins	123	84.2	22	84	0.97 (0.31–3.01)	0.962	
Dose to organs at risk	104	71.2	20	77	0.74 (0.27–1.98)	0.551	
Dose inhomogeneity	115	78.8	19	73	1.37 (0.52–3.51)	0.519	
Use of high tangents	140	95.9	25	96	0.93 (0.10–8.00)	0.950	
Regional nodal irradiation	105	71.9	13	50	2.56 (1.1–6.00)	0.002	
Internal mammary node irradiation	105	71.9	19	73	0.94 (0.36–2.40)	0.903	
Flap-based breast reconstruction	126	86.3	23	88	0.82 (0.22–3.00)	0.766	
Implant-based breast reconstruction	136	93.1	21	65	3.24 (1.1–10)	0.031	
Financial issues/reimbursement	100	68.5	20	77	0.65 (0.24–1.73)	0.389	

Note: The absolute numbers and percentages correspond to the total response obtained in each item. OR — odds ratio; CI — confidence interval



















#### Constraints

BC stage and flap-based breast reconstruction were the factors associated with absolute contraindications for the use of hypofractionated schedules.

Table 4. Absolute contraindications for the use of moderately hypofractionated post-operative radiation therapy schedules as reported by radiation oncologists

	H	/PO	Other		00 (050) 50		
Characteristics	N	%	N	%	OR (95% CI)	p-value	
Age	139	95.2	20	76.9	2.62 (0.62–10.7)	0.176	
Breast cancer stage	142	97.3	23	88.5	4.63 (1.07–22)	0.036	
Breast size	139	95.2	25	96.1	0.79 (0.08–6.74)	0.832	
Breast side (right or left)	145	99.3	26	100	1.83 (0.07–46)	0.672	
Breast cancer molecular subtype	144	98.6	25	96.1	2.88 (0.25–33)	0.374	
Tumor grade	4	2.7	20	76.9	6.00 (0.90-44.6)	0.05	
Surgical margins	141	96.6	23	88.5	3.68 (0.82–16.8)	0.07	
Dose to organs at risk	117	80.1	19	73.1	1.49 (0.51–3.87)	0.415	
Dose inhomogeneity	121	82.9	22	84.6	0.88(0.27-2.79)	0.827	
Use of high tangents	144	98.6	26	100	1.09 (0.05–23.4)	0.548	
Regional nodal irradiation	136	93.1	22	84.6	2.47 (0.71–8.58)	0.143	
Internal mammary node irradiation	124	84.9	22	84.6	1.02 (0.32–3.26)	0.967	
Flap-based breast reconstruction	139	95.2	21	80.7	3.14 (1.07–11.3)	0.04	
Implant-based breast reconstruction	124	84.9	23	88	0.73 (0.20–2.66)	0.638	
Financial issues/reimbursement	143	97.9	25	96.1	1.91 (0.19–19)	0.577	

Note: The absolute numbers and percentages correspond to the total response obtained in each item. OR — odds ratio; CI — confidence interval



















# CONCLUSION

The unrestricted and wide application of hypofractionated post-operative RT in clinical practice across LAC still faces some reluctance, especially when regional nodal irradiation is needed or after mastectomy with or without reconstruction.



















# TIME INTERVAL BETWEEN DIAGNOSIS TO TREATMENT OF BREAST CANCER AND THE IMPACT OF HEALTH INSURANCE COVERAGE: A **SUB ANALYSIS OF THE AMAZONA III STUDY (GBECAM 0115)**

- Breast cancer (BC) is the most common type of cancer among women in Brazil.
- Evidence shows that delayed treatment onset is associated with increased mortality.

# Objective:

To evaluate median days between diagnosis and treatment of breast cancer and factors associated with delayed start of treatment (>60 days after diagnosis).



















#### **METHODS**

The analysis included 1709 stage I–III BC patients from AMAZONA III, a prospective, observational study, diagnosed from January 2016 to March 2018 in 22 centers in Brazil.

Diagnosis: date from the first breast biopsy.

Start treatment: date from surgery or neoadjuvant systemic treatment.

# **RESULTS**

#### Cohort characteristics

Median age: 52 years (IQR 44-62)

Race: white 55% multiracial 37%

Premenopausal: 32%

**Stage:** I 26% II 44% III 30%

**Coverage: Public** 66% **Private** 34%

#### > Time to first treatment

**Table 4** Time to first treatment received

Treatment	Public $n$ (%)	Private n (%)	P value
Time to first treatment received			<.0001
0 to 30 days	237 (21.1)	260 (45.4)	
31 to 60 days	381 (34.0)	229 (40.0)	
More than 60 days	503 (44.9)	84 (14.6)	



















#### > Median time from diagnosis to treatment initiation (PUBLIC x PRIVATE)

Table 3 Median time from diagnosis to treatment onsetdays, median (IQR)

	N	Public	N	Private	P value
Overall, median (IQR)	1121	56 (34–87)	573	34 (22–49)	<.0001
Type of first treatment received, med	ian (IQR)				
Surgery for breast cancer	576	66 (36-100)	418	35 (21-50)	<.0001
Neoadjuvant chemotherapy	534	48 (33-70)	153	30 (22-44)	<.0001
Neoadjuvant endocrine Therapy	9	66 (49-84)	2	28 (25-32)	_
Clinical stage at initial diagnosis, me	dian (IQR)				
I	216	63 (36-95)	225	34 (22-48)	<.0001
II	493	59 (36-95)	250	34 (22-52)	<.0001
III	412	48 (32-73)	98	33 (21-49)	<.0001
Molecular subtype, median (IQR)					
Luminal A	415	59 (35-97)	206	34 (21-50)	<.0001
Luminal B/ HER-2 negative	92	60 (37-82)	63	32 (17-46)	<.0001
Luminal B/ HER-2 positive	133	54 (36-84)	77	32 (23-49)	<.0001
HER-2 positive (non-luminal)	58	50 (27-78)	25	28 (24-42)	0.0619
Triple negative	126	50 (29-84)	56	30 (20-47)	0.0002
Region, median (IQR)					
Central-West	377	55 (29-86)	19	25 (11-63)	0.0162
Northeast	397	50 (34-81)	31	31 (21-52)	<.0001
North	3	59 (0-94)	2	34 (27-42)	_
Southeast	147	74 (47-132)	281	37 (25-50)	<.0001
South	184	57 (36-84)	240	28 (17-44)	<.0001















#### > Factors associated with delayed start of treatment

**Table 5** Univariable and multivariable analyses to identify factors associated with delayed start of treatment (> 60 days after diagnosis)

Parameter Lev	Levels	vels Delay treatment onset (> 60 days) n (%)	Univariable	analysis		Multivariable analysis <sup>d</sup>		
			Odds ratio <sup>b</sup>	95% CI <sup>c</sup>	p value	Odds ratio <sup>b</sup>	95% CI°	p value
Race					<.0001			
White <sup>a</sup>		280 (30.11)						
Non-white		310 (41.84)	1.67	1.36 to 2.04				
Employed					<.0001			
Yes <sup>a</sup>		196 (28.20)						
No		389 (40.19)	1.71	1.39 to 2.11				
Education					<.0001			0.0003
Illiterate		26 (43.33)	3.65	2.07 to 6.44		2.46	1.17 to 5.21	
Did not complete elementary school		206 (45.78)	4.03	2.95 to 5.50		2.31	1.51 to 3.55	
Completed elementary school		107 (46.12)	4.08	2.85 to 5.85		2.83	1.76 to 4.56	
Completed high school		158 (36.74)	2.77	2.02 to 3.81		1.98	1.31 to 2.99	
University degree or higher <sup>a</sup>		74 (17.33)						
Healthcare coverage					<.0001			<.0001
Private <sup>a</sup>		84 (14.66)						
Public		503 (44.87)	4.74	3.65 to 6.14		4.74	3.09 to 7.26	















# **CONCLUSIONS**

- Breast cancer treatment within 60 days is significantly less frequent in the public health care system.
- Race and socioeconomic status are factors associated with this observation.
- By characterizing the delays in care delivery, our study will aid stakeholders to better design interventions and allocate resource to improve timely treatment for breast cancer in Brazil.



















# REAL-WORLD DATA ON FIRST-LINE TREATMENT OF HORMONE RECEPTOR-POSITIVE, HER2-NEGATIVE, METASTATIC BREAST CANCER IN BRAZIL (BRAVE STUDY - LACOG 0221)

- Endocrine therapy (ET) plus CDK 4/6 inhibitors is considered the standard of care as first-line (1L) therapy in hormone receptor positive (HR+)/HER2 negative (HER2-) metastatic breast cancer (mBC).
- Nonetheless, the use of chemotherapy (CT) is frequent in clinical practice, and access to CDK 4/6 inhibitors is limited in Brazil.

#### Objective:

To describe 1L treatment patterns in public and private health system cohorts, to describe PFS and OS.

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#### **METHODS**

Observational retrospective study assessing female patients ≥ 18 years old diagnosed with de novo or recurrent HR+/HER2- mBC in the period of January 2018 to December 2020.

#### RESULTS

- 307 patients | 156 from public and 151 from private
- **13 sites** in Brazil.

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Table 1. First-line treatment for MBC in Public and Private Healthcare Systems.

Treatment	Public (n=156)	Private (n=151)	Total (N=307)
Chemotherapy	32 (20.5%)	23 (15.2%)	55 (17.9%)
Chemotherapy followed by ET	27 (17.3%)	8 (5.3%)	35 (11.4%)
Chemotherapy followed by ET + CDK 4/6 inhibitor	1 (0.6%)	6 (4.0%)	7 (2.3%)
Endocrine therapy	90 (57.7%)	40 (26.5%)	130 (42.4%)
Endocrine therapy + CDK 4/6 inhibitor	4 (2.6%)	73 (48.3%)	77 (25.1%)
None*	2 (1.3%)	1 (0.7%)	3 (1.0%)

The most frequently used CDK4/6i in 1L setting was Ribociclib (65.0%), followed by Palbociclib (36.9%) and Abemaciclib (7.1%).

There was an **increase** in the use of **ET+CDK4/6i** over time:

13 (17.8%) in 2018, 27 (37.0%) in 2019, and 33 (45.2%) in 2020.

\*Patients died before being treated.









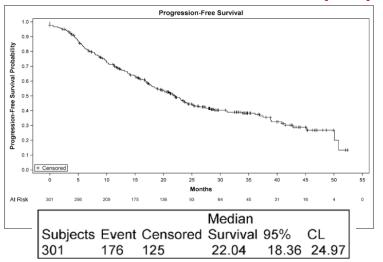




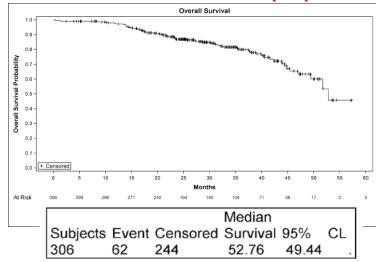




#### **PROGRESSION-FREE SURVIVAL (PFS)**



# **OVERALL SURVIVAL (OS)**



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OFFICIAL









# CONCLUSIONS

- ET is the most used 1L treatment in clinical practice in Brazil, followed by ET + CDK4/6i and CT.
- A large difference in CDK4/6i use was observed between private and public health systems, reflecting the current limited access to CDK4/6i in Brazil.
- This study highlights treatment **disparities** within a nation with a fragmented health insurance system.

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