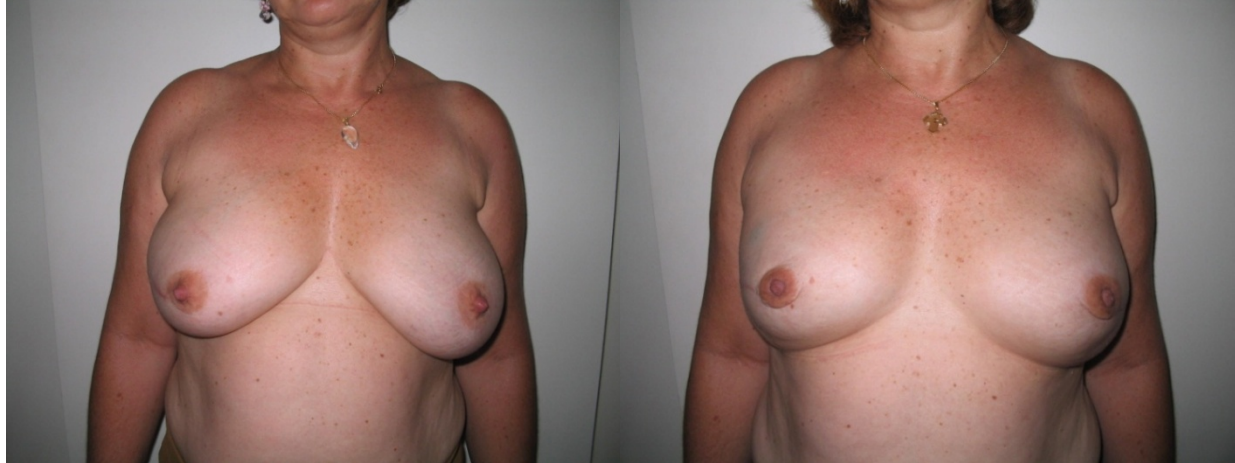


Mastectomia profilática

Régis Resende Paulinelli, MD, PhD



- Pacientes sem câncer (alto risco)
 - Familiar
 - Genético



- Pacientes com câncer (contralateral)

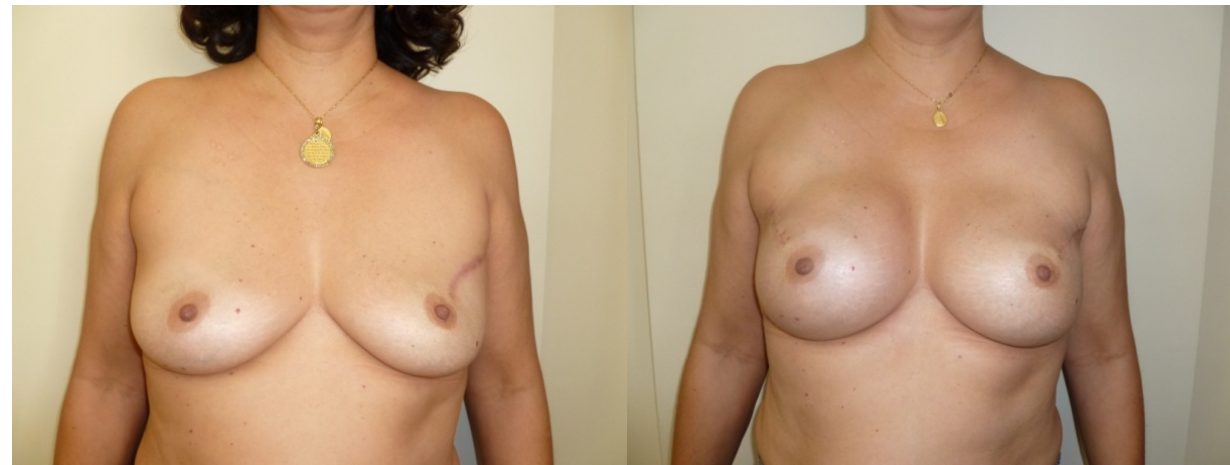


TABLE 2 Bilateral prophylactic mastectomy and breast cancer risk

Study	BPM		No BPM		Follow-up (years)	HR	<i>p</i> value
	<i>N</i>	BCD (%)	<i>N</i>	BCD (%)			
Meijers-Heijboer et al. ^{51,55}	76	0 (0)	63	8 (12.7)	3	NA ^a	0.003
Rebbeck et al. ⁵⁶	105	2 (1.9)	378	184 (48.7)	6.4	0.09	<0.0001
Skytte et al. ⁵⁷	96	3 (3.1)	211	16 (7.6)	7.7	0.394	0.14
Domcheck et al. ⁵⁸	247	0 (0)	1372	98 (7.1)	3	NA ^a	ND

BCD breast cancer diagnosis, BPM bilateral prophylactic mastectomy, HR hazard ratio, ND not determined

^a There were no cancer events in those with risk-reducing mastectomy, therefore HRs cannot be estimated

- Redução de risco de CA? ➤ 90-95%
- Aumento de sobrevida? ➤ BRCA1 aos 40 anos – 7%
- Preservação do mamilo? ➤ 1/3 nos estudos
- Linfonodo sentinela? ➤ 6-10% oculto (1-3% invasor)
- Idade limite? ➤ 60a

- Metanálise com 61 estudos
- 15.077 mulheres com mastectomia profilática
- Arrependidas com a decisão: 5-15%
- Insatisfeitas com o resultado estético: 15-19% (em 1 ano – piora com o tempo)
- Resultado estético pior após a cirurgia: 23- 55%
- Problemas psicológicos: 32%
- Piora na sexualidade: 23-45%
- Perda da sensibilidade: 45%
- Dor e desconforto: 69 - 71%
- Cirurgias adicionais não previstas: 4% sem e 64% com reconstrução

Carbine NE, Lostumbo L, Wallace J, Ko H.

Risk-reducing mastectomy for the prevention of primary breast cancer.

Cochrane Database of Systematic Reviews 2018, Issue 4. Art. No.: CD002748.

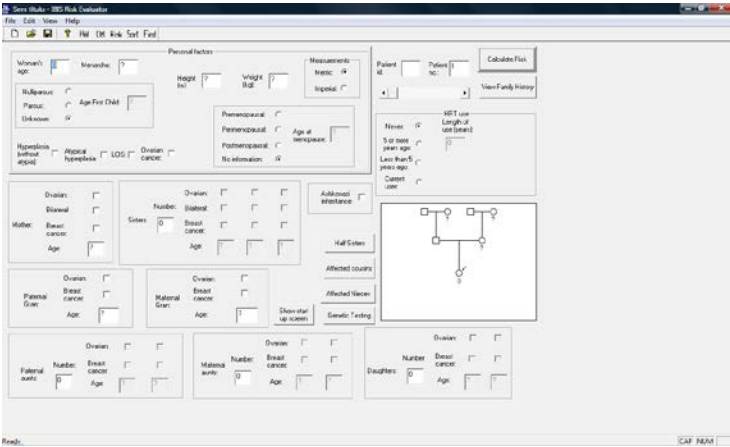
DOI: 10.1002/14651858.CD002748.pub4.

TABLE 1 Common risk factors and their risk ratios

Risk factor	Risk ratio
Genetic risk factors	
Being a woman	114 ²⁰⁶
Age	4–158 ²⁰⁶
Mutation in high-penetrance gene (<i>BRCA1</i> , <i>BRCA2</i> , <i>p53</i> , <i>STK11</i>)	26–36 ^{207,208}
Mutation in moderate-penetrance gene (<i>PTEN</i> , <i>p16</i> , <i>PALB2</i> , <i>CDH1</i> , <i>NF1</i> , <i>CHEK2</i> , <i>ATM</i> , <i>BRIP1</i>)	2.0–2.7 ²⁰⁹
Family history of breast cancer in mother, daughter, or sister	1.55–1.8 ^{210,211}
Family history of breast cancer in aunt, niece, or grandmother	1.15 ^{37,212}
Genetic polymorphisms (e.g. <i>FGFR2</i> , <i>TNRC9</i> , <i>MAP3K1</i> , <i>LSP1</i> , <i>MRPS30</i>)	1.07–1.26 ²¹³
Non-genetic factors	
Mantle radiation (lymphoma treatment)	5.6 ²¹⁴
Acini/lobule in benign breast tissue	
11–20	2.8 ²¹⁵
21–40	3.23
≥41	11.85
Mammographic density	
>25–50% (scattered densities)	2.4 ²¹⁶
>50–75% (heterogeneously dense)	3.4
>75% (dense)	5.3
Lobular carcinoma in situ on a breast biopsy	5.4 ²¹⁷
Atypical hyperplasia on a breast biopsy	5 ²¹⁸
Increased bone mineral density	2.0–2.5 ²¹⁹
Age at first birth > 35 years	1.31–1.93 ^{38,220}
Obesity (body mass index > 30 kg/m ²)	1.2–1.8 ^{211,220}
Any benign breast disease	1.47 ²²⁰
High circulating insulin level	1.46 ²²¹
Five years of combined hormone replacement therapy (e.g. estrogen and progestin)	1.26–1.76 ^{222–224}
High circulating estrogen level	1.1–1.7 ^{221,225}
Nulliparity (no live births)	1.26–1.55 ^{38,220}
Alcohol consumption more than approximately 1 drink/day	1.31 ²²⁰
Menstrual periods starting before age 12 years	1.21 ³⁸

Modelos

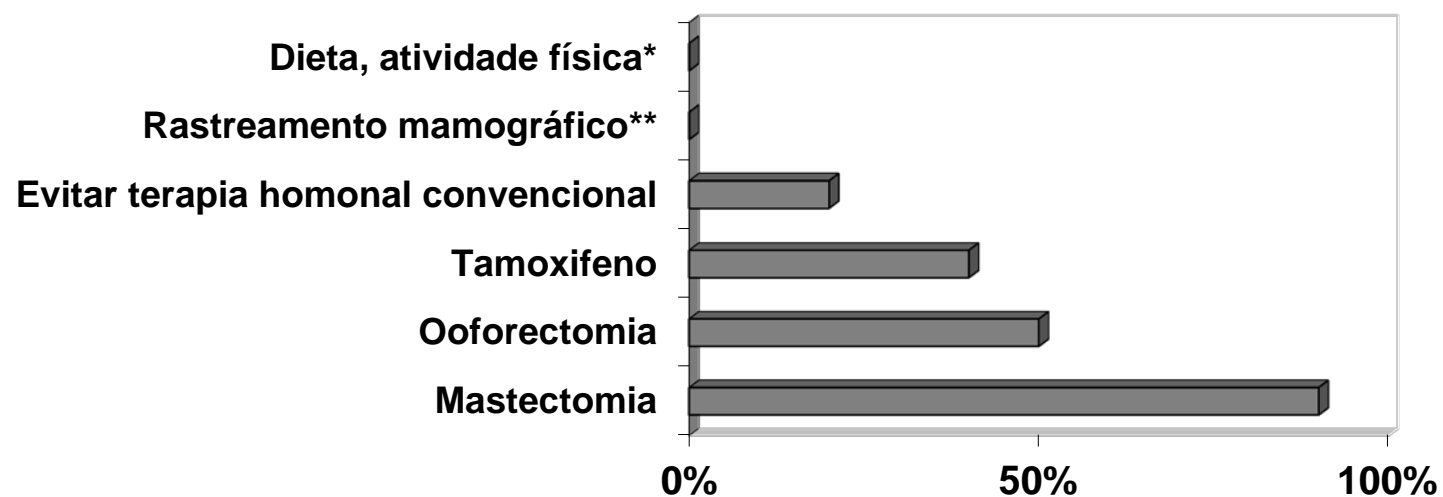
- Gail
- Claus
- Tyrer-Cuzik
- BRCAPRO
- BOADICEA



Estimativa correta do risco

- 35% - antes do aconselhamento do risco (a maioria superestima o risco);
- 81% - após o aconselhamento;
- 51% - após 1 ano.
- > satisfeita, redução da ansiedade e medo

Linden et al. Acta Oncol. 2003; 42:726-34.



Decision Tool for Women with BRCA Mutations

Patient Characteristics

Current Age

Mutation Status

Screening & Prevention Strategies

For Comparison:
No Interventions

For Comparison:
Women without
BRCA mutations

Screening

Prophylactic Oophorectomy

Prophylactic Mastectomy

Probability of Outcomes

100%

90%

80%

70%

60%

50%

40%

30%

20%

10%

0%



By Age 70:



15 out of 100 women died from **other causes**

0 out of 100 women died from **ovarian cancer**

1 out of 100 women died from **breast cancer**

0 out of 100 women are **alive with ovarian cancer** of which 0 also had breast cancer

5 out of 100 women are **alive after breast cancer**

79 out of 100 women are alive and **never had breast or ovarian cancer**

[show details](#)

Trends in Contralateral Prophylactic Mastectomy for Unilateral Cancer: A Report From the National Cancer Data Base, 1998–2007

Katharine Yao, MD¹, Andrew K. Stewart, MA², David J. Winchester, MD¹, and David P. Winchester, MD¹

Ann Surg Oncol (2010) 17:2554–2562

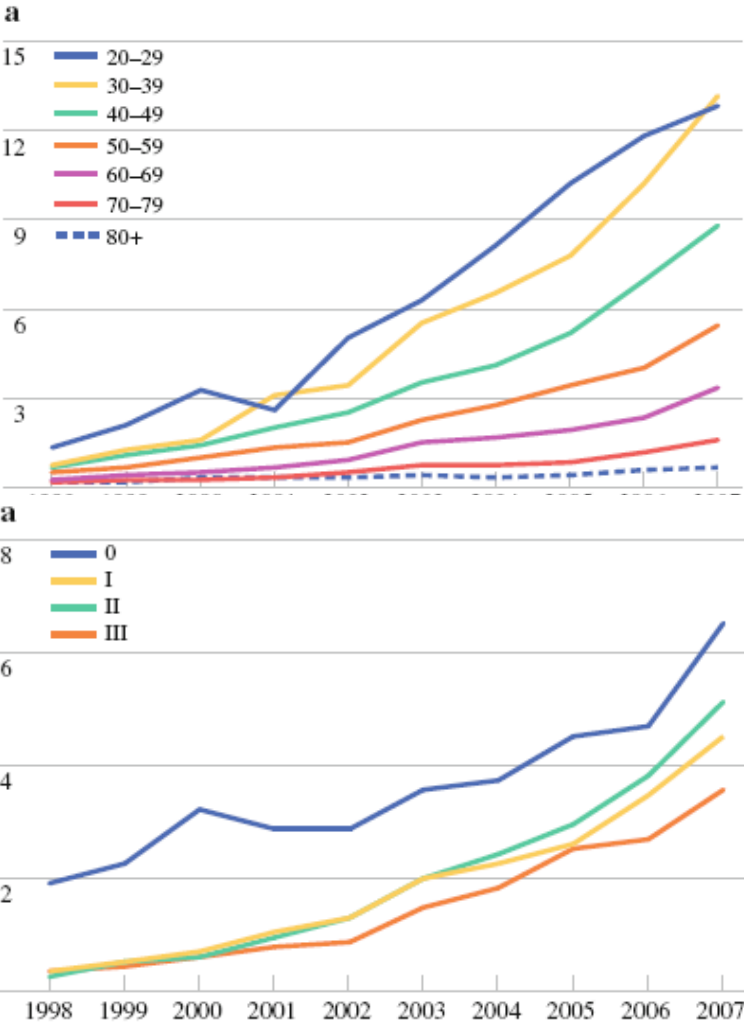


Figure 2. Motivations for Contralateral Prophylactic Mastectomy Receipt

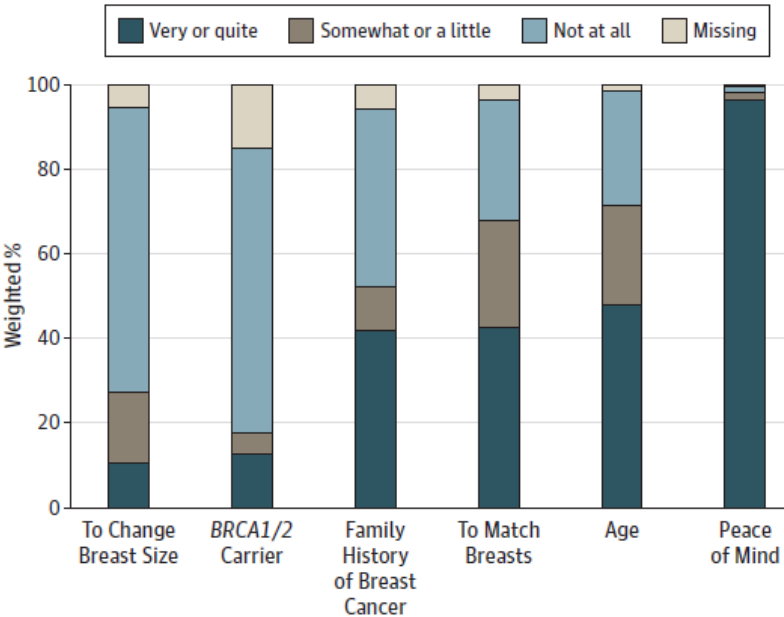
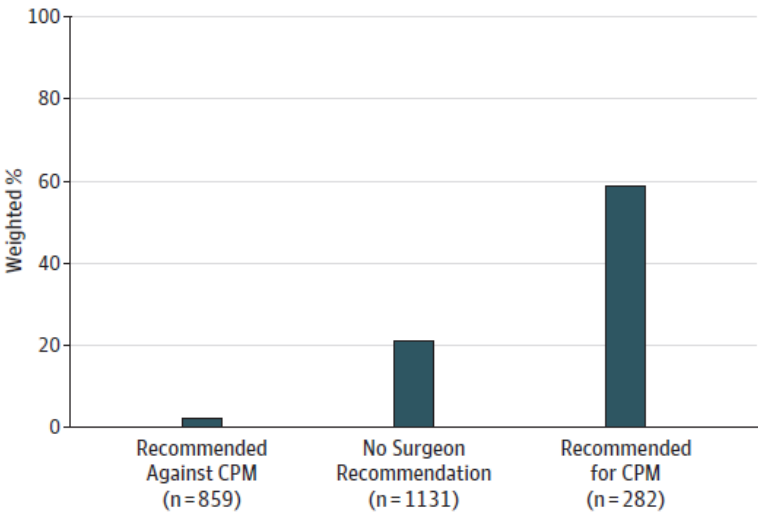
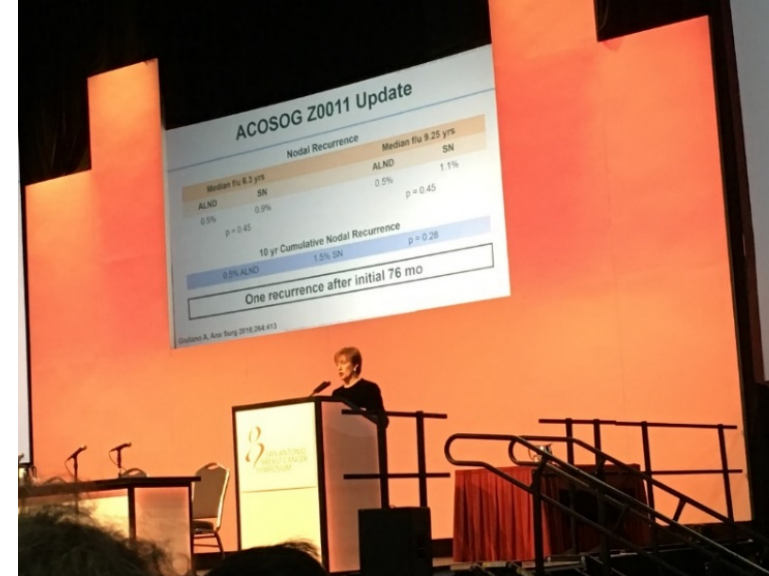
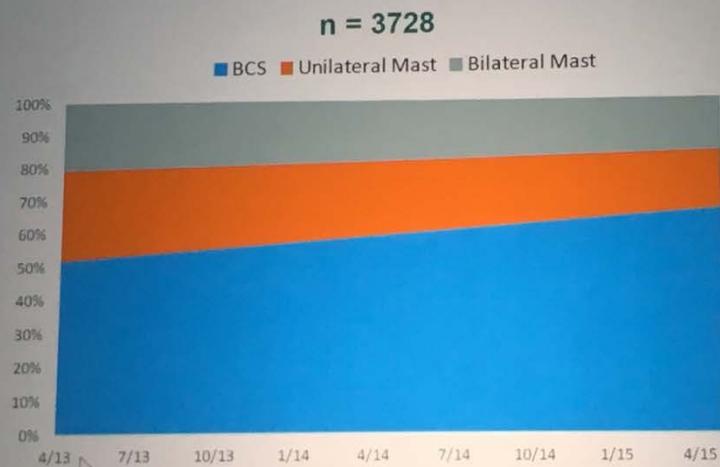


Figure 3. Receipt of Contralateral Prophylactic Mastectomy (CPM) by Surgeon Recommendation





Trends in Final Surgical Treatment



Adjusted for age, race, site, T, N, grade, and surgeon

ISORT

The iCan Care Study P01CA163233

Preliminary data only - not for reproduction or distribution

Morrow M, Submitt

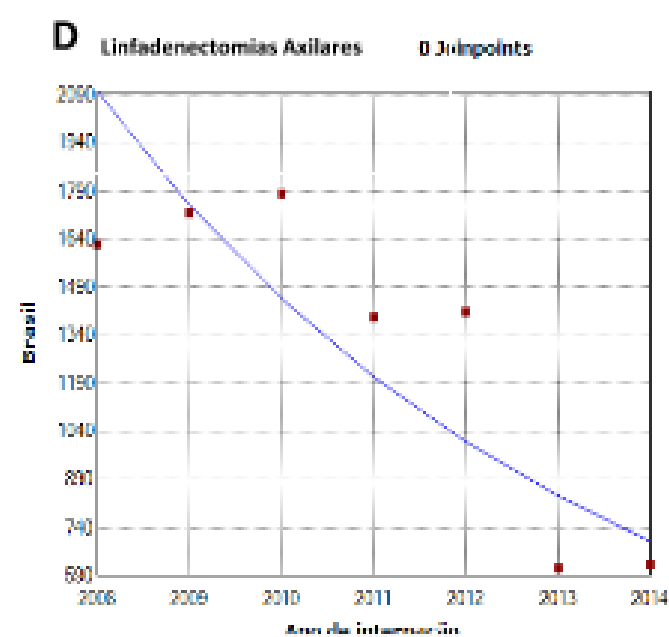
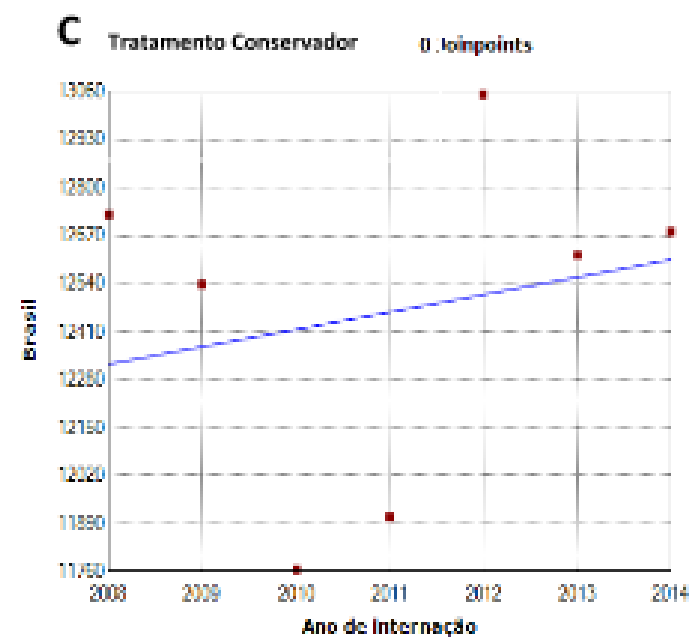
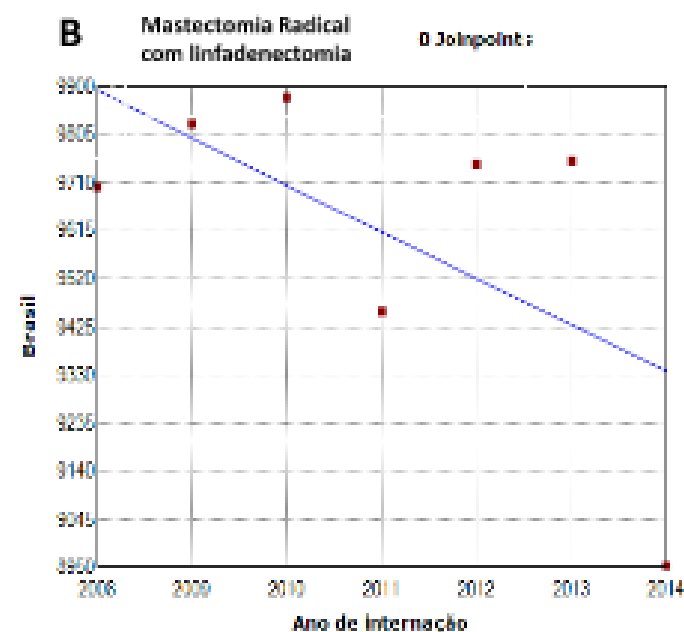
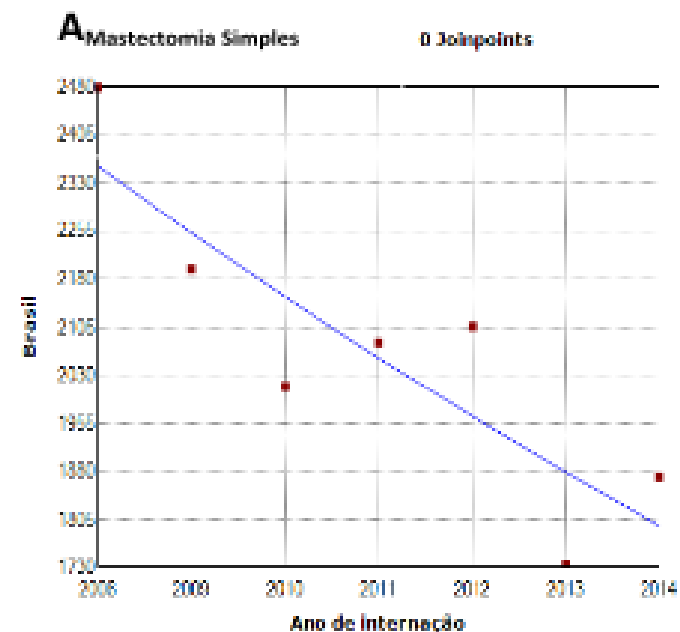
Trends in Post Lumpectomy Surgery



ISORT

The iCan Care Study P01CA163233

Morrow M, Submitt



JSO, 2017

DOI: 10.1002/js.24372

RESEARCH ARTICLE

WILEY *Journal of Surgical Oncology*

Trends in breast cancer surgery at Brazil's public health system

Ruffo Freitas-Júnior MD, PhD¹ | Debora Melo Gagliato MD² | João Wesley Cabral Moura Filho MD¹ | Pollyana Alves Gouveia BSc | Rosemar Macedo Sousa Rahal MD, PhD¹ | Régis Resende Paulinelli MD, PhD¹ | Luis Fernando Pádua Oliveira MD, PhD¹ | Paola Ferreira Freitas MD¹ | Edesio Martins PhD¹ | Cicero Urban MD, PhD^{2,3} | Clécio Énio Murta Lucena MD, PhD⁴

F Plástica Mamária Reconstructiva com

F Reconstrução com retalho miocutâneo



Contralateral Prophylactic Mastectomy (CPM) Consensus Statement from the American Society of Breast Surgeons: Data on CPM Outcomes and Risks

Judy C. Boughey, MD¹, Deanna J. Attai, MD², Steven L. Chen, MD, MBA³, Hiram S. Cody, MD⁴, Jill R. Dietz, MD⁵, Sheldon M. Feldman, MD⁶, Caprice C. Greenberg, MD, MPH⁷, Rena B. Kass, MD⁸, Jeffrey Landercasper, MD⁹, Valerie Lemaine, MD, MPH¹, Fiona MacNeill, MB, BS¹⁰, David H. Song, MD¹¹, Alicia C. Staley, BS, MBA, MS¹², Lee G. Wilke, MD⁷, Shawna C. Willey, MD¹³, Katharine A. Yao, MD¹⁴, and Julie A. Margenthaler, MD¹⁵

CPM should be considered for those at significant risk of CBC

- Documented *BRCA1/2* carrier.
- Strong family history, but patient has not undergone genetic testing.
- History of mantle chest radiation before age 30 years.

CPM can be considered for those at lower risk of CBC

- Gene carrier of non-*BRCA* gene (e.g., *CHEK-2*, *PALB2*, *p53*, *CDH1*).
- Strong family history, patient *BRCA* negative, no known *BRCA* family member.

CPM may be considered for other reasons

- To limit contralateral breast surveillance (dense breasts, failed surveillance, recall fatigue).
- To improve reconstructed breast symmetry.
- To manage risk aversion.
- To manage extreme anxiety. (This may be better managed through psychological support strategies.)

CPM should be discouraged

- Average-risk woman with unilateral breast cancer.
- Women with advanced index cancer (e.g., inflammatory breast cancer, T4 or N3 disease, stage IV disease).
- Women at high risk for surgical complications (e.g., patients with comorbidities: obesity, smoker, diabetes).
- Woman tested *BRCA* negative with a family of *BRCA*-positive carriers.
- Male breast cancer, including *BRCA* carriers.

Porque é melhor o tratamento conservador?

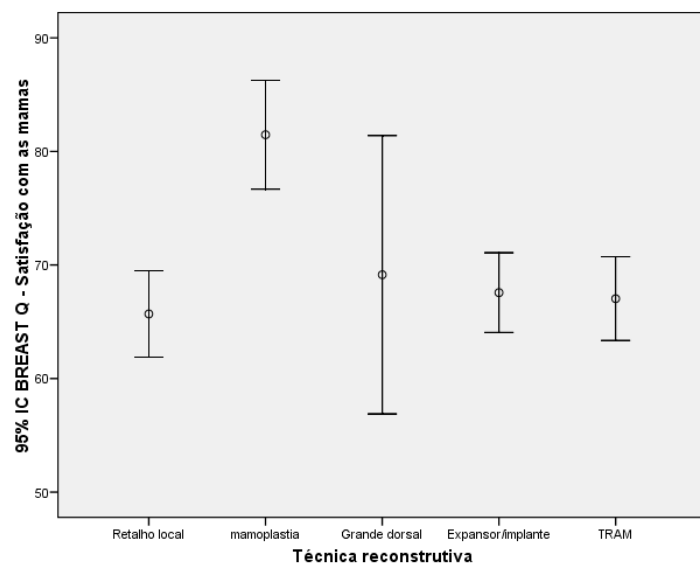
Complicações

Reconstruções totais: 108 (66,3%)

Reconstruções parciais: 55 (33,7%)

OR: 3,66 (2,29 – 5,85)

$p < 0,01$



Use of and Mortality After Bilateral Mastectomy Compared With Other Surgical Treatments for Breast Cancer in California, 1998-2011

JAMA. 2014;312(9):902-914. doi:10.1001/jama.2014.10707

Allison W. Kurian, MD, MSc; Daphne Y. Lichtensztajn, MD, MPH; Theresa H. M. Keegan, PhD; David O. Nelson, PhD; Christina A. Clarke, PhD; Scarlett L. Gomez, PhD

189.734 mulheres.

Mastectomy increased from 1998 to 2011, from 10.3% to 12.3%.



Risco contralateral

- Risco de CA contralateral: 0,6% ao ano;
- QT reduz 20%, TMX 50%, IA 60%. Atualmente 0,2%.
- BRCA = risco 30-40% em 10 anos.
- RXT por linfoma Hodking – 30% até os 50 anos;
- Mulheres <30 anos, com parentes de 1º – 14,7% em 10 anos;
- Cochrane 2010 (12 estudos) – benefício apenas EC 0 e 1.

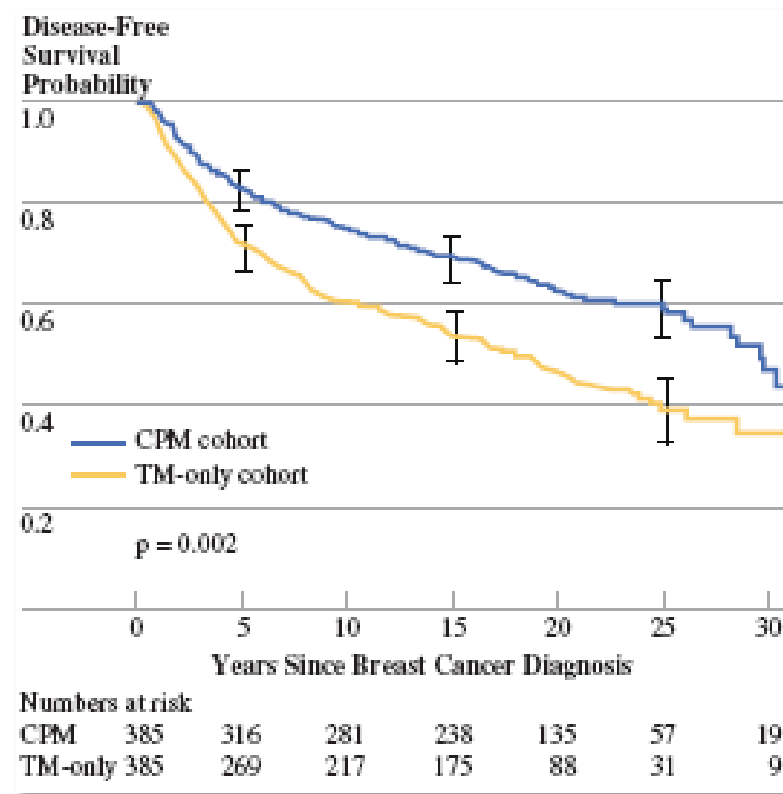
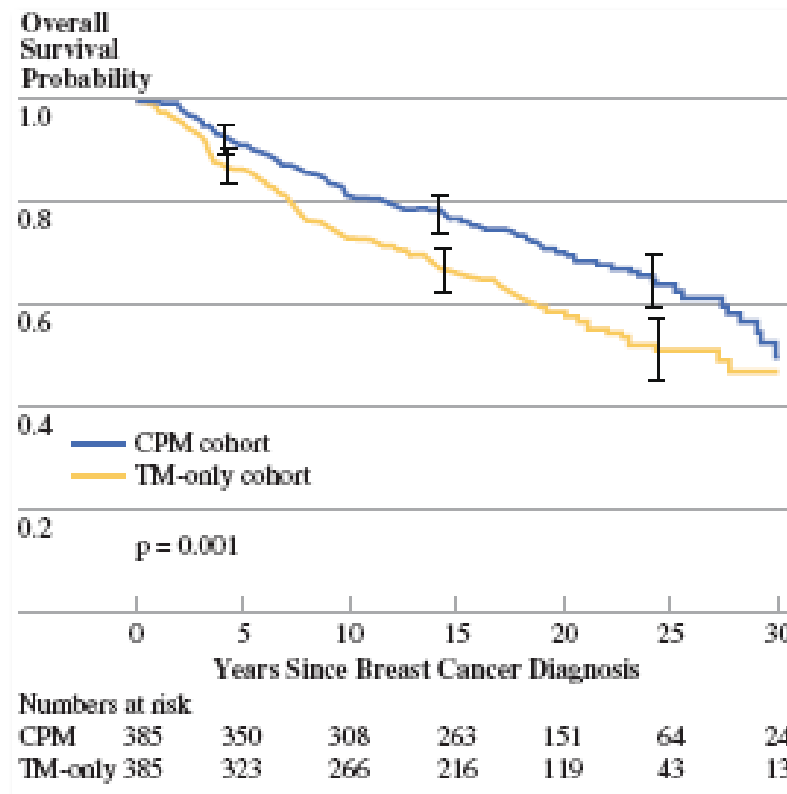


Contralateral Prophylactic Mastectomy is Associated with a Survival Advantage in High-Risk Women with a Personal History of Breast Cancer

Ann Surg Oncol (2010) 17:2702–2709

Judy C. Boughey, MD¹, Tanya L. Hoskin, MS², Amy C. Degnim, MD¹, Thomas A. Sellers, PhD³, Joanne L. Johnson, RN⁴, Melanie J. Kasner, LPN⁴, Lynn C. Hartmann, MD⁵, and Marlene H. Frost, PhD⁴

- Coorte retrospectiva, 385 pacientes em cada braço, EC I e II;
- Média 17,3 anos de seguimento;
- Redução de 95% na incidência de CA contralateral;



RESEARCH

Contralateral mastectomy and survival after breast cancer in carriers of BRCA1 and BRCA2 mutations: retrospective analysis

OPEN ACCESS

Kelly Metcalfe professor¹ adjunct scientist², Shelley Gershman registered nurse^{1,2}, Parviz Ghadirian professor³, Henry T Lynch professor⁴, Carrie Snyder registered nurse⁴, Nadine Tung associate professor⁵, Charmaine Kim-Sing professor⁶, Andrea Eisen medical oncologist⁷, William D Foulkes professor⁸, Barry Rosen associate professor⁹, Ping Sun statistician², Steven A Narod professor²

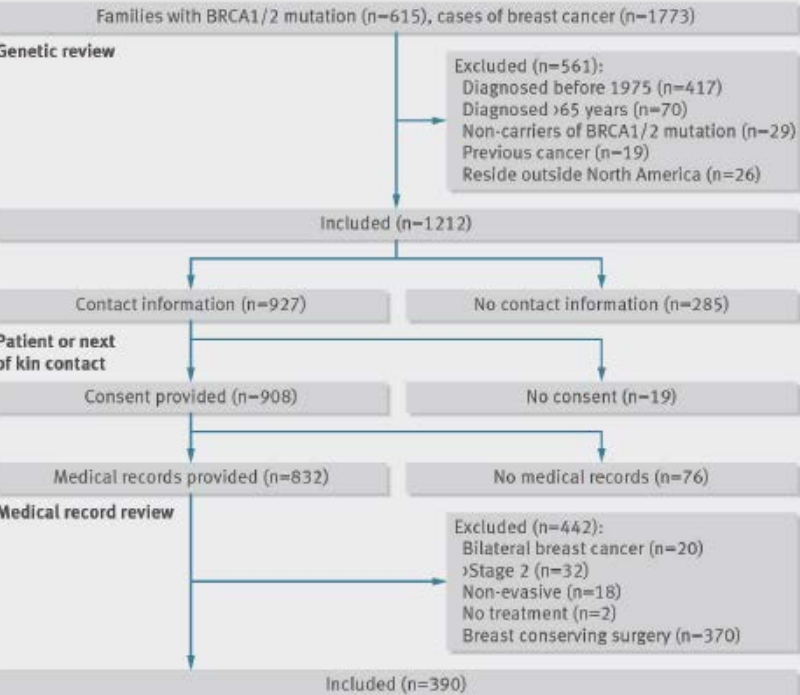
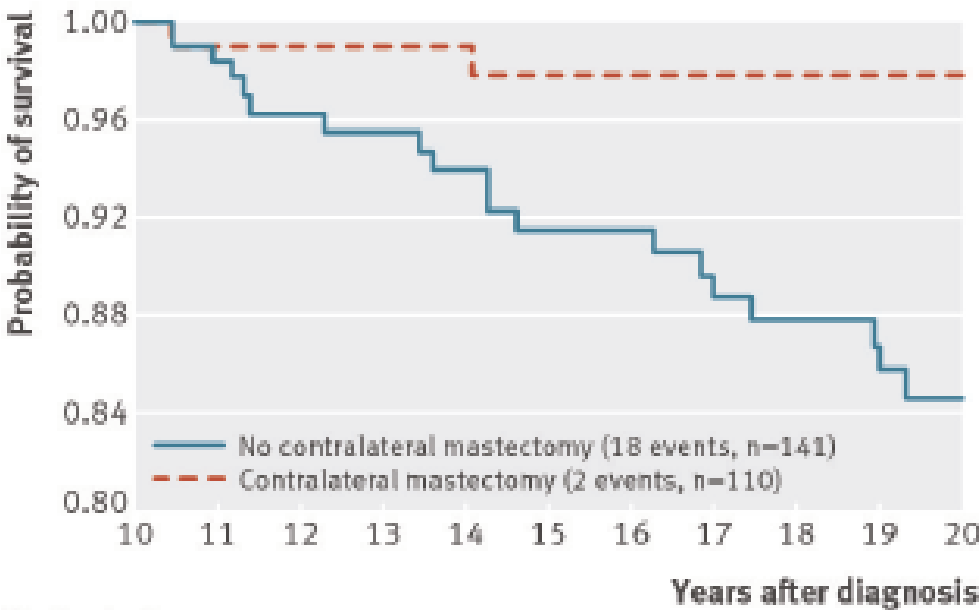


Fig 1 Flow of participants through study



No in study											
Contralateral mastectomy	110	104	95	92	83	71	61	58	45	42	39
No contralateral mastectomy	141	134	127	122	116	108	101	94	87	83	72

Fig 2 Survival from 10 to 20 years after breast cancer, by contralateral mastectomy

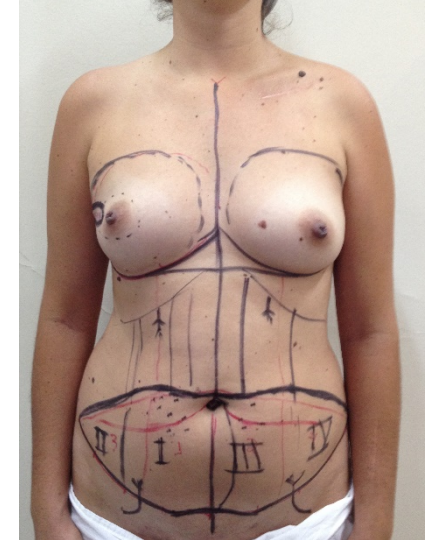
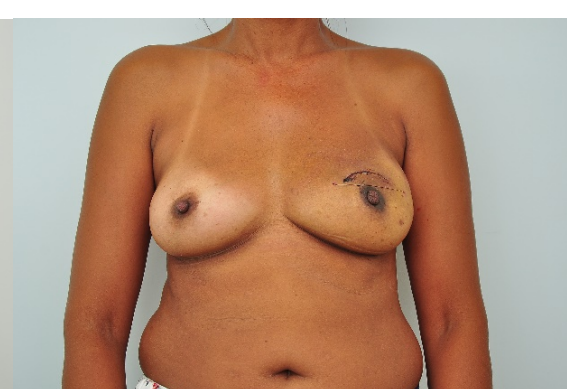


11th European Breast Cancer Conference

- 1.696 com BRCA1 e 1.139 com BRCA2
- HEBON (Hereditary Breast and Ovarian Cancer Netherlands database).
- 38% das BRCA1 e 32% das BRCA2 com mastectomia bilateral.
- Seguimento 10 anos.
- BRCA2 – TU + favoráveis, mais idosas, RH e HER2+.
- Mortalidade específica por CA de mama aos 65 anos: BRCA 1 (99,6% X 93%) $p < 0,01$; BRCA2 (100% X 98%) NS
- **Genes de penetrância moderada ou baixa?**



**Mastectomia não se justifica
como método de simetrização,
pelo mesmo motivo de que a
histerectomia não se justifica
como método de
contracepção!!!!**



**Não é uma emergência e nunca é
obrigatória!!!!**

**A paciente com câncer não está
normalmente em condições psicológicas
ideais para tomar essa decisão
(como a paciente que faz uma cesariana não está
em condições de fazer uma LTB).**

ANGELINA EXTRAÍ OS DENTES



PARA NÃO TER CÁRIES

ONCOPLASTIA E RECONSTRUÇÃO MAMÁRIA

Educação continuada teórico-prática da SBM

2018
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INSCRIÇÕES ABERTAS



1 vaga de estágio remunerado
para Mastologistas

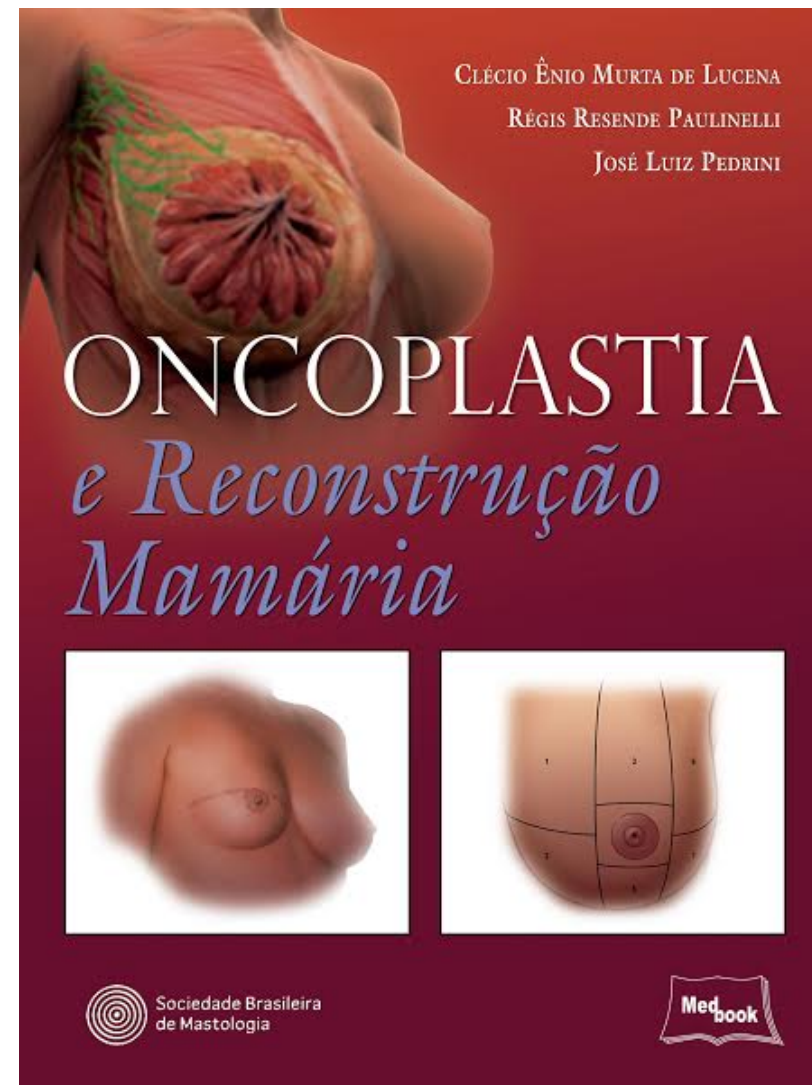
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30h/semana
12 meses

2018

Enviar curriculum Lattes até 30-11-17 para:
rrpaulinelli@gmail.com ou (062) 999775509

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Obrigado!