OFFICIAL

best of SABCS®

Brussels, January 30, 2021

SABCS
SAN ANTONIO BREAST CANCER SYMPOSIUM

An initiative of

INSTITUT JULES BORDET INSTITUUT

ENCORE MEDICAL EDUCATION

OFFICIAL

best of 8 SABCS®

Oncogenetics / Supportive care / Risk prevention

Pr François Duhoux
Medical Oncology and Center for Human Genetics
Cliniques universitaires Saint-Luc

Financial Disclosure

My institution has received payments from the following pharmaceutical companies on my behalf:

- **Amgen**
- **AstraZeneca**
- **Eli Lilly**
- **mundipharma**
- **Novartis**
- **Pfizer**
- **Roche**
- **Teva**

OFFICIAL

best of SABCS®

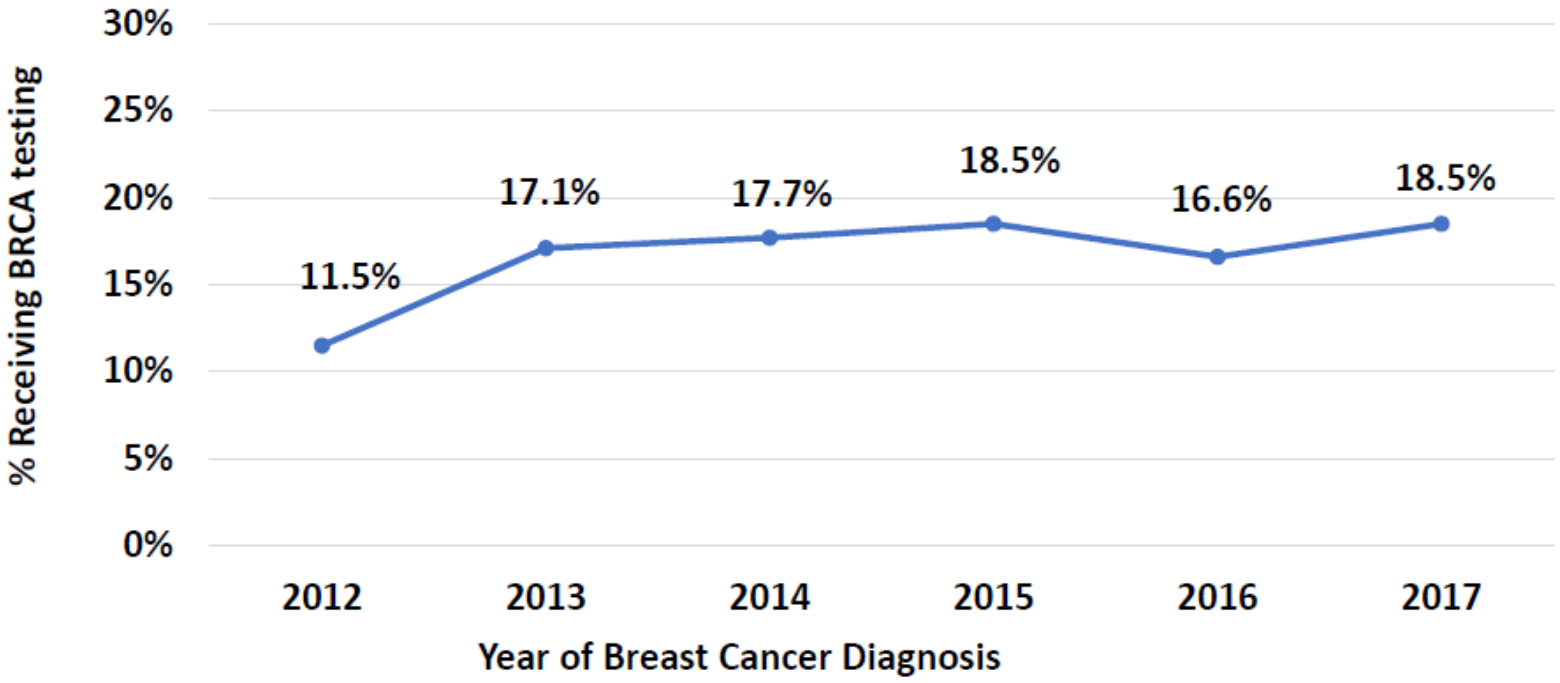
Oncogenetics / Supportive care / Risk prevention

Pr François Duhoux
Medical Oncology and Center for Human Genetics
Cliniques universitaires Saint-Luc

PS7-78: Trends in BRCA Testing Among Patients Diagnosed with Breast Cancer - A Retrospective Analysis of a United States Commercial Claims Database from the PRIOR-1 Study

Shelby L Corman[1], Hrishikesh Kale[1], Pooja Shah[1], Gboyega Adeboyeje[2]
1. Pharmerit – an OPEN Health Company; 2. Merck & Co. Inc.

Trend in prevalence of receiving a BRCA test



OFFICIAL best of SABCS

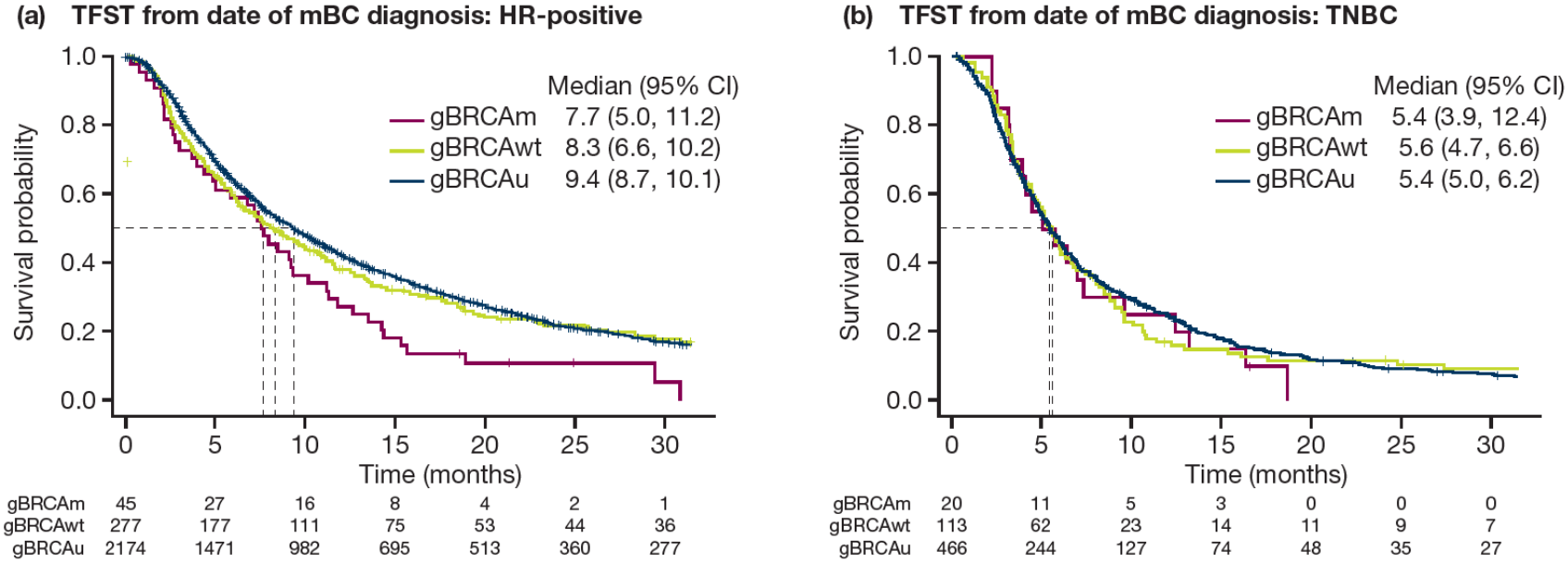
Real-world clinical outcomes of patients with BRCA-mutated (BRCAm) HER2-negative metastatic breast cancer: a CancerLinQ® study

Robert S Miller,[1] Stella Mokiou,[2] Aliki Taylor,[2] Miao Jiang,[3] Ping Sun,[2] Susan McCutcheon[2]

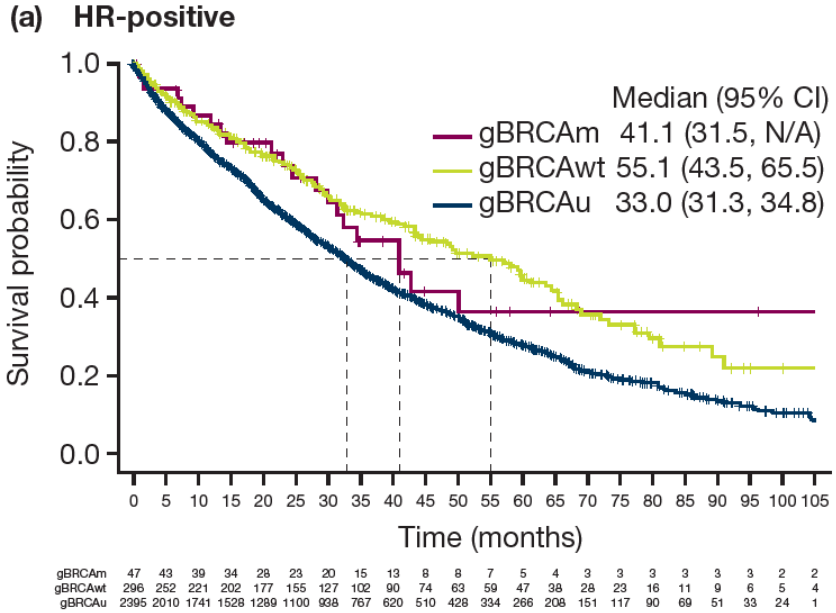
[1]CancerLinQ®, American Society of Clinical Oncology, Alexandria, VA, USA; [2]AstraZeneca, Cambridge, UK; [3]AstraZeneca, Gaithersburg, MD, USA

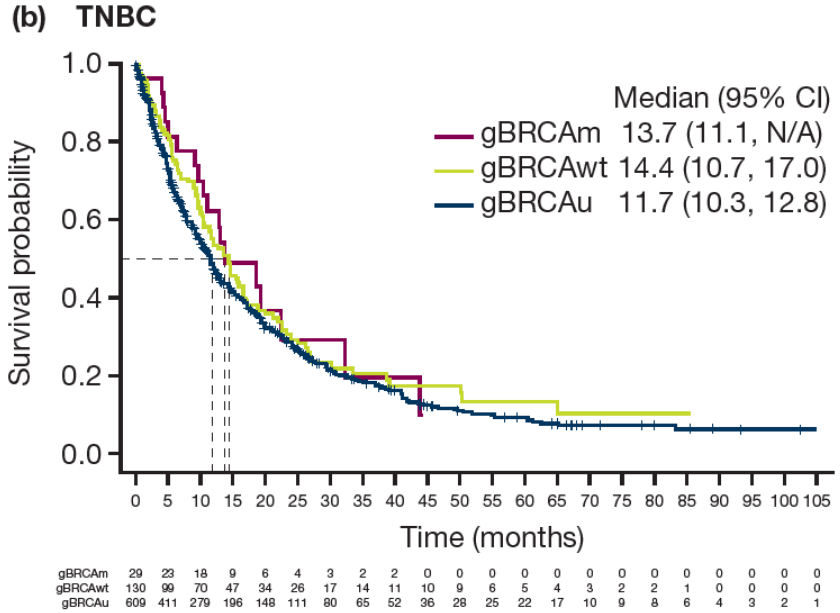
PS7-66

- Retrospective cohort study of patients diagnosed with HER2-negative mBC between January 1, 2010 and December 31, 2018, who were treated in routine clinical practice and included in the CancerLinQ Discovery database.
- Patients were grouped according to:
  - recorded gBRCA status: gBRCAm, gBRCA wild type (gBRCAwt) or unknown gBRCA (gBRCAu); and
  - hormone receptor (HR) status: HR-positive or triple-negative breast cancer (TNBC).
- Primary objective: time to first subsequent treatment (TFST), calculated from: 1) date of mBC diagnosis; and 2) date of initiation of first-line treatment for mBC.
- Secondary objective: real-world overall survival (OS), calculated from date of mBC diagnosis.
- TFST and OS (in months) were estimated using Kaplan–Meier methods; median (95% confidence intervals) are reported.



Median TFST was similar irrespective of gBRCA status when patients were stratified by HR status.





Median OS was similar irrespective of gBRCA status, when stratified by HR status

University of BRISTOL

San Antonio Breast Cancer Symposium – December 8-12, 2020

CANCER RESEARCH UK INTEGRATIVE CANCER EPIDEMIOLOGY PROGRAMME

Exploring the causal role of the human gut microbiome in breast cancer risk using Mendelian randomization (MR)

Tim Robinson, Grace Edmunds, Bryony Hayes and Kaitlin Wade

NIHR Academic Clinical Lecturer in Medical Oncology
CRUK-ICEP
University of Bristol, UK
@drtimrobinson

GS2-06

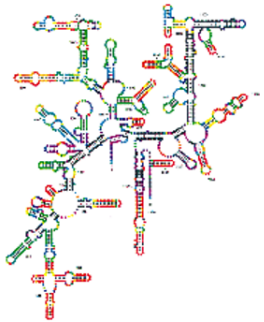
Breast Cancer Risk GWAS

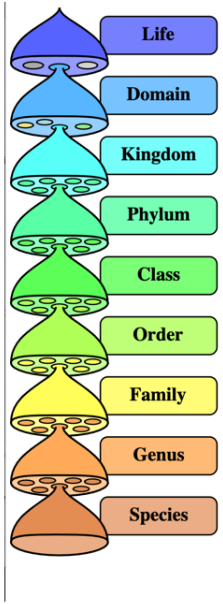
- Breast Cancer Association Consortium (BCAC) and Consortium of Investigators of Modifiers of BRCA1/2 (CIMBA)
- Overall breast cancer: 133 384 cases and 113 789 controls
- Subtype: 106 278 cases, 91 477 controls
- TNBC meta-analysis: 18 016 cases and 100 971 controls

Zhang et al *Nature Genetics* 2020

Microbiome GWAS

- Harmonized analytical pipeline with taxon-specific models



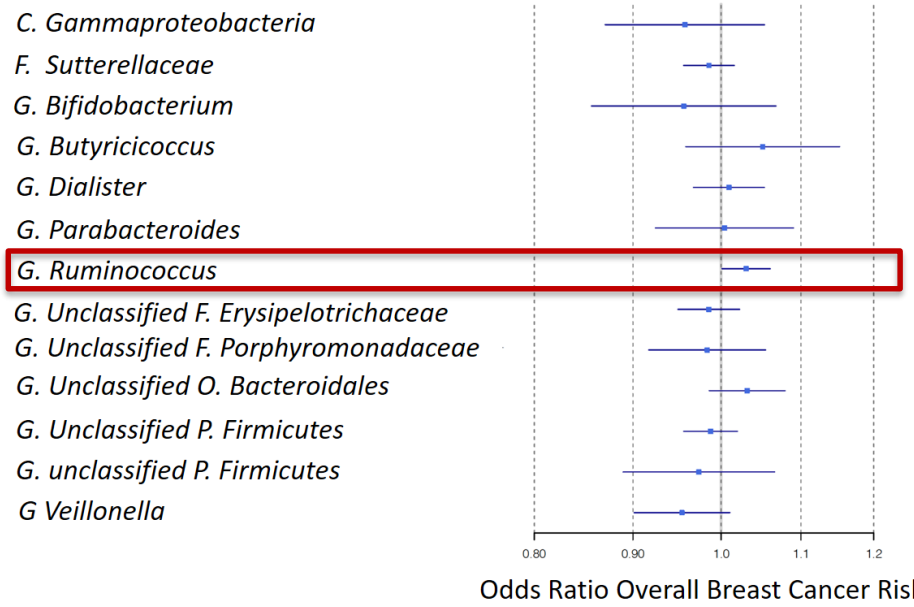


- Flemish Gut Flora Project (FGFP, n=2223)
- Food-Chain Plus (FoCus, n=950)
- PopGen (n=717)

Hughes et al *Nature Microbiology* 2020

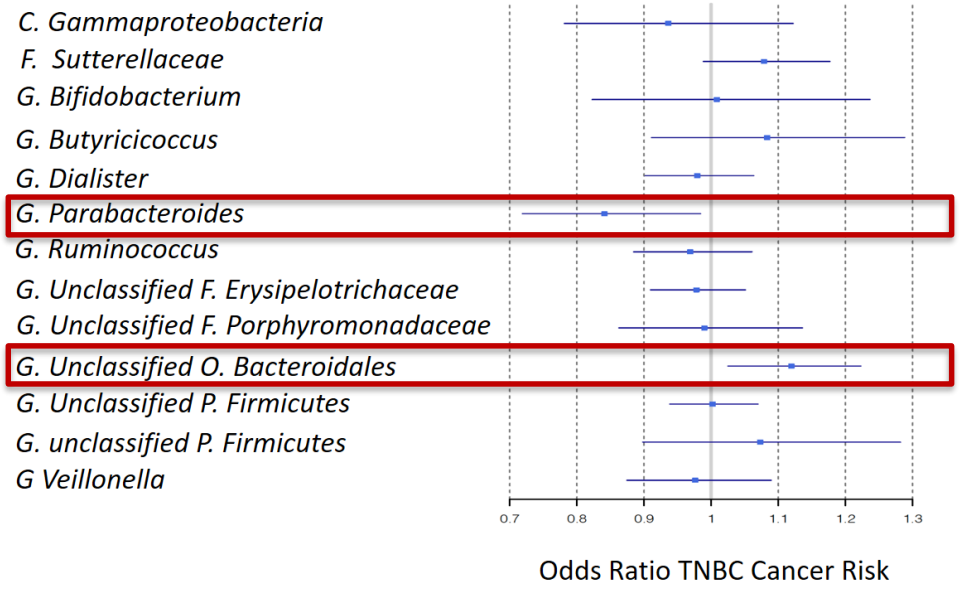
Results – Microbial traits affect overall breast cancer risk

- *G. Ruminococcus:* OR 1.03 (1.00-1.06), p=0.043



Results – Microbial traits affect TNBC breast cancer risk

- *G. Parabacteroides:* OR 0.84 (0.72-0.98), p=0.031
- *G. Unclassified O. Bacteroidales:* OR 1.12(1.03-1.22), p= 0.012



OFFICIAL

best of SABCS®

Oncogenetics / Supportive care / Risk prevention

Pr François Duhoux
Medical Oncology and Center for Human Genetics
Cliniques universitaires Saint-Luc

Targeting Depressive Symptoms in Younger Breast Cancer Survivors: A RCT of Mindfulness Meditation and Survivor Education

PA Ganz, JE Bower, AH Partridge, AC Wolff,

ED Thorner, H Joffe, MR Irwin, L Petersen, CM Crespi

**UCLA Jonsson Comprehensive Cancer Center, Los Angeles;
Dana Farber Cancer Institute, Boston; Johns Hopkins Medicine &
Sidney Kimmel Comprehensive Cancer Center, Baltimore**

Pathways to Wellness Study, funded by NCI R01 CA200977 & BCRF

GS2-10

Pathways to Wellness (PTW) Randomized Trial

ClinicalTrials.gov NCT03025139

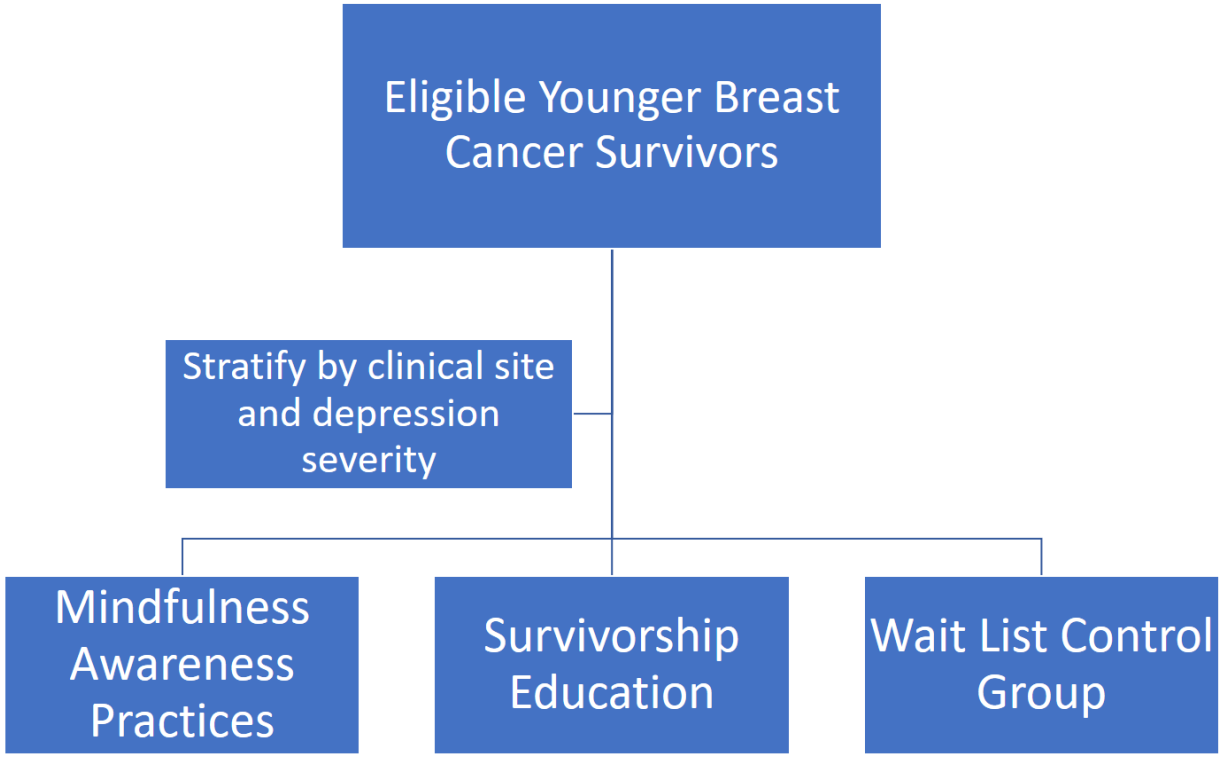
- **Phase III, randomized, multi-institution trial testing efficacy of two interventions targeting depressive symptoms in younger breast cancer survivors**
- **Interventions were compared to a concurrent wait list control (WLC) group**
- **Interventions were 6-week group programs**
  - **Mindfulness Awareness Practices (MAPS)**
  - **Survivorship Education (SE)**
- **Site instructors delivered 2-hour structured content at each session with monitoring of fidelity**

→ Inclusion of 247 patients

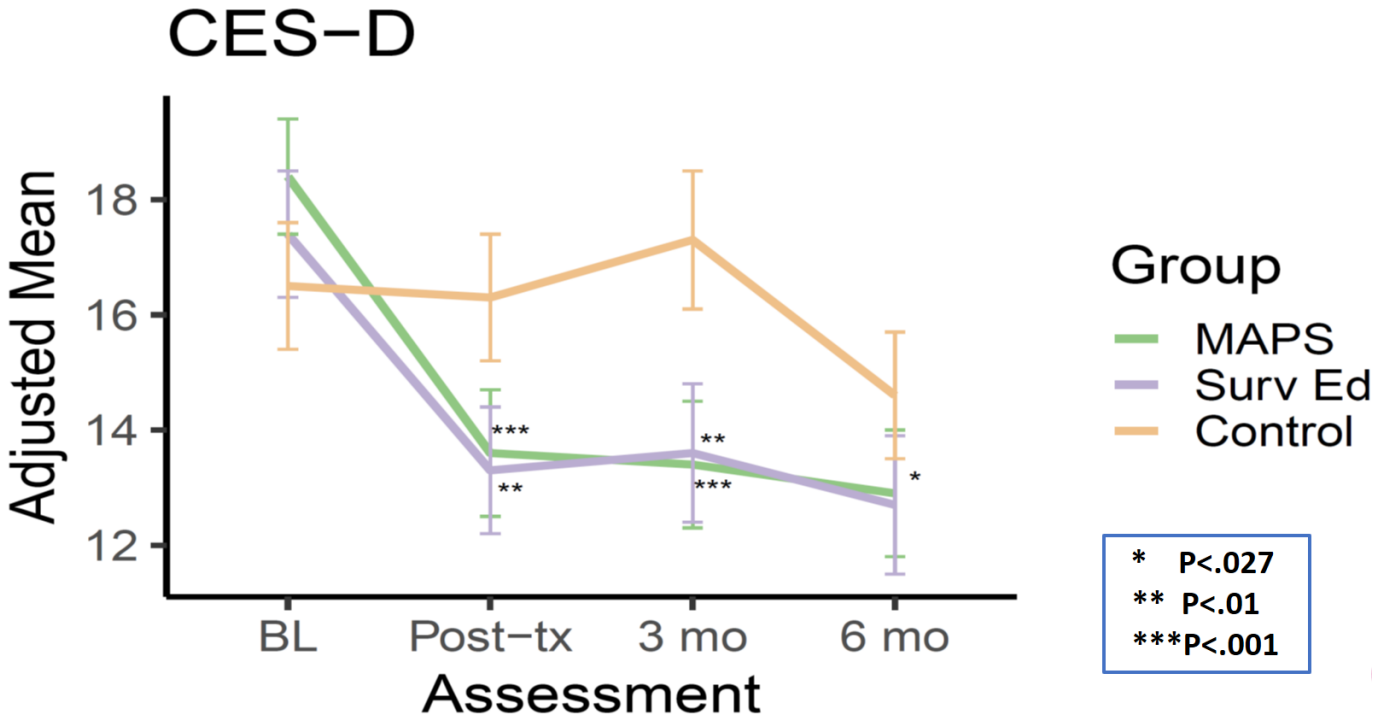
Intervention content - 6 group sessions

Mindfulness Awareness Practices (MAPS)	Survivorship Education (SE)
What is mindfulness? Listening, Embodiment and Obstacles Working with pain Working with Difficult Emotions, Cultivating Positive Emotions Working with Thoughts, Mindful Interactions Wrap-up	Breast cancer 101: important issues for younger survivors QOL in breast cancer survivors Energy balance, Nutrition, Physical Activity Cancer in the Family: Cancer Genetics and Testing Relationships and Work-Life Balance Body image, menopause, sexual health; moving forward

PTW Study Schema



PTW Depression Outcomes



* P<.027
** P<.01
***P<.001

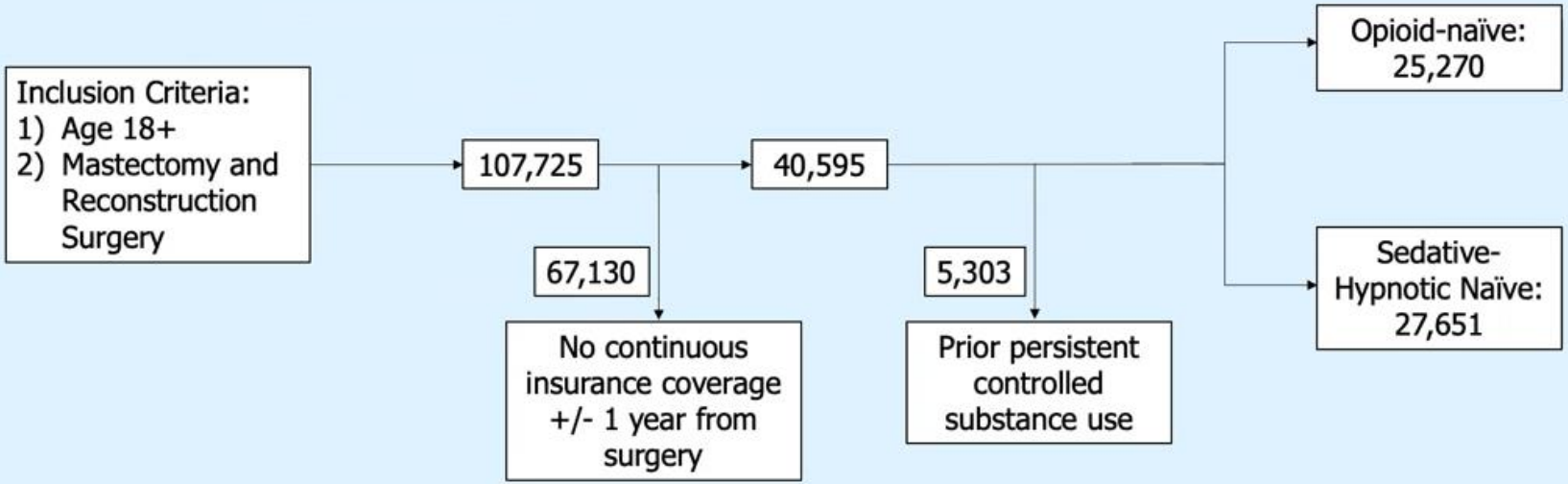
Persistent Controlled Substance Use Following Mastectomy with Reconstruction Surgery

Jacob Cogan MD, Rohit Raghunathan MS, Melissa Beauchemin PhD RN, Melissa Accordino MD, Alexander Melamed MD, Jason Wright MD, and Dawn Hershman MD

HERBERT IRVING COMPREHENSIVE CANCER CENTER
Columbia University Medical Center

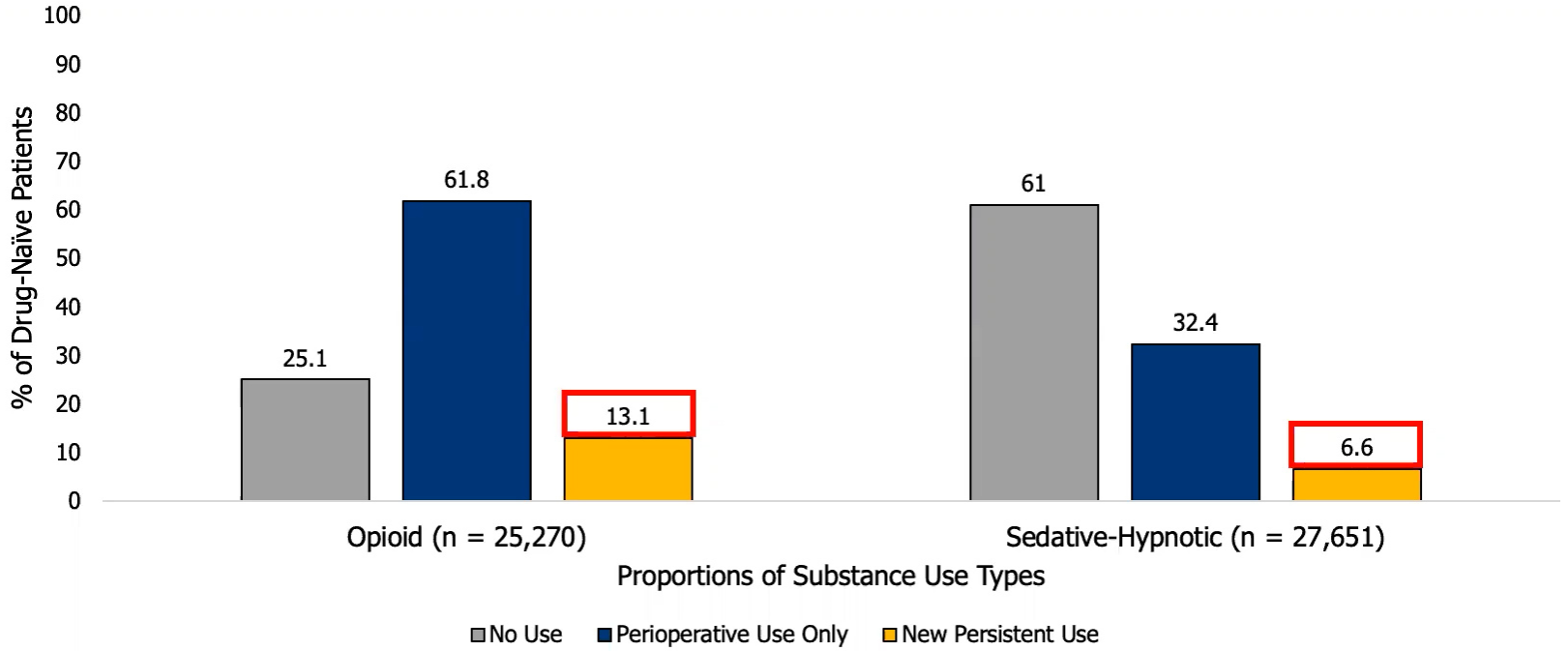
GS3-08

COHORT

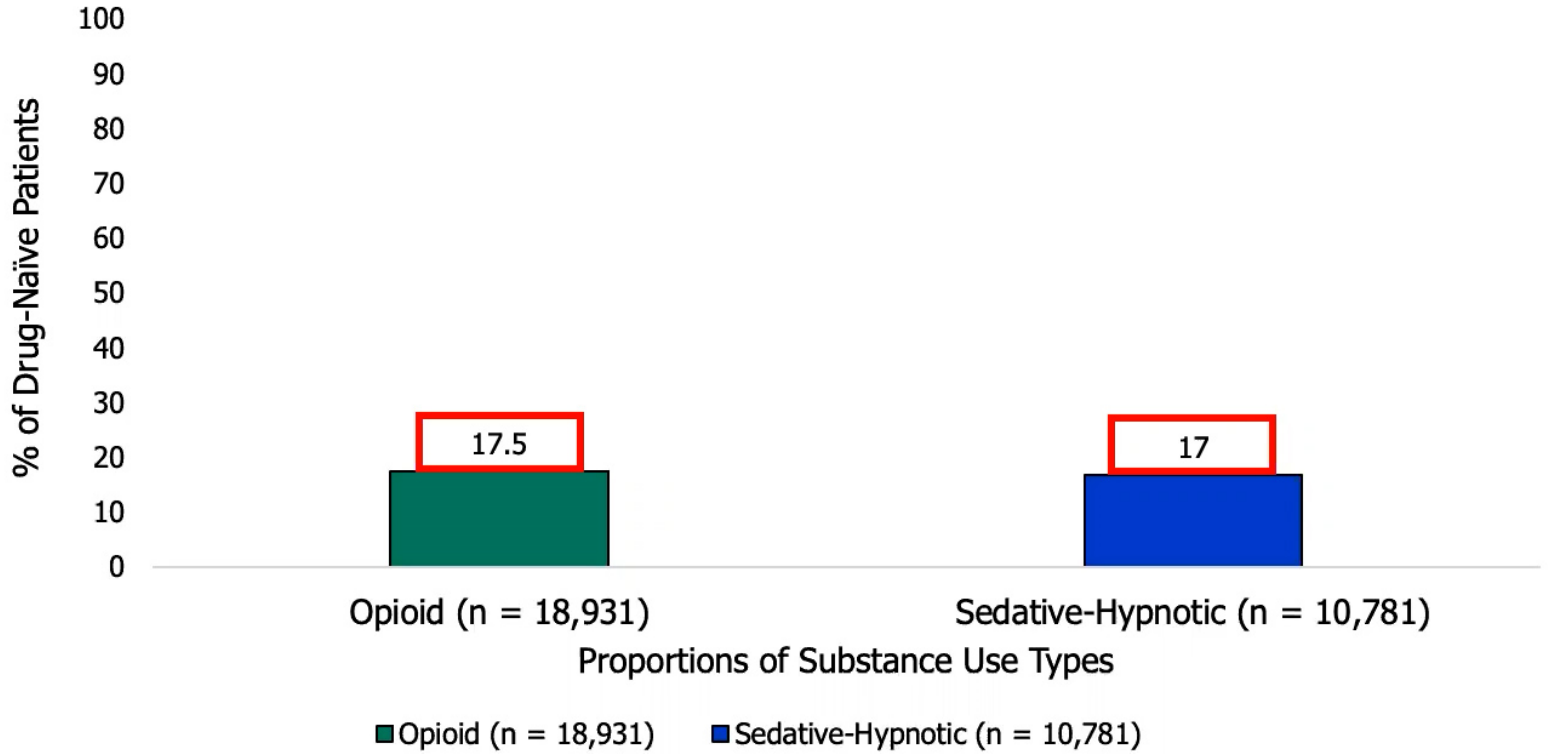


based on healthcare claims database

Rates of New Persistent Controlled Substance Use



Persistent Controlled Substance Use Among Those Who Initiate



OFFICIAL best of SABCS

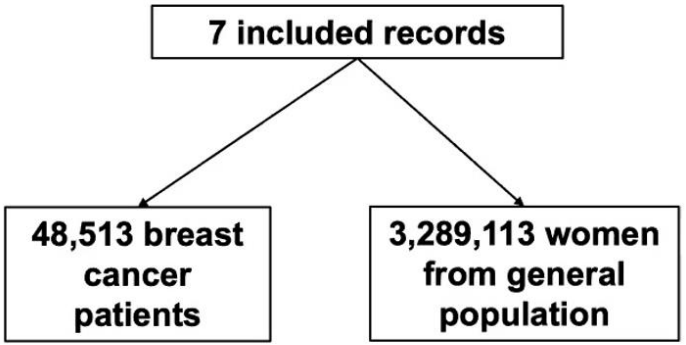
Chances of Pregnancy after Breast Cancer, Reproductive and Disease Outcomes: a Systematic Review and Meta-analysis

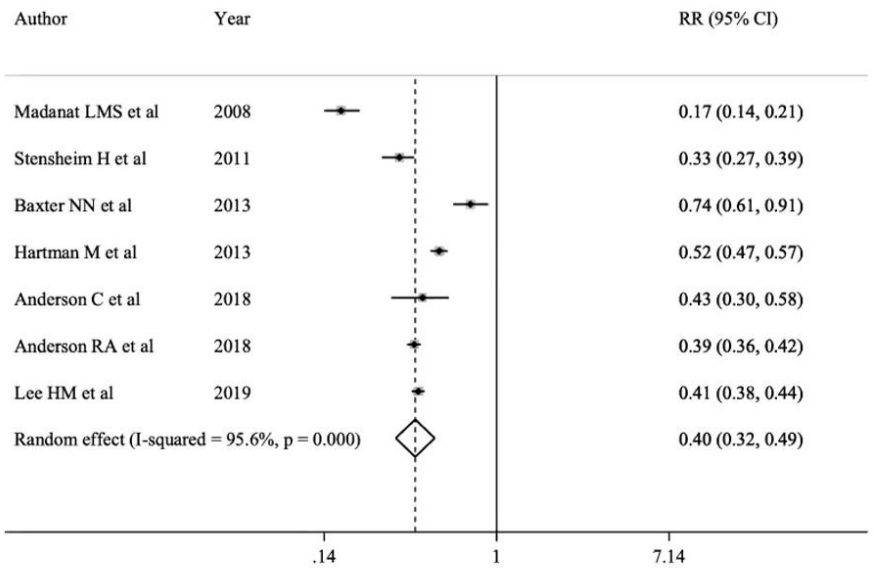
Eva Blondeaux[1,2], Marta Perachino[1,2], Marco Bruzzone[1], Richard A. Anderson[3], Evandro de Azambuja[4], Philip D. Poorvu[5], Hee Jeong Kim[6], Cynthia Villarreal-Garza[7], Barbara Pistilli[8], Ines Vaz-Luis[8], Cristina Saura[9], Kathryn J. Ruddy[10], Maria Alice Franzoi[4], Chiara Sertoli[2], Marcello Ceppi[1], Hatem A. Azim Jr.[7], Frederic Amant[11], Isabelle Demeestere[12], Lucia Del Mastro[1,2], Ann H. Partridge[5], Olivia Pagani[13], Fedro A. Peccatori[14], Matteo Lambertini[1,2]

[1]IRCCS Ospedale Policlinico San Martino, Genova, Italy. [2]University of Genova, Genova, Italy. [3]MRC Centre for Reproductive Health, The Queen's Medical Research Institute, The University of Edinburgh, Edinburgh, UK. [4]Institut Jules Bordet, Université Libre de Bruxelles (U.L.B.), Brussels, Belgium. [5]Dana-Farber Cancer Institute, Boston MA, USA. [6]Asan Medical Center, Seoul, Korea. [7]Hospital Zambrano Hellion, Tecnologico de Monterrey, San Pedro Garza Garcia, Nuevo Leon, Mexico. [8]Institut Gustave Roussy, Villejuif, France. [9]Vall d´Hebron University Hospital (HUVH), Vall d´Hebron Institute of Oncology (VHIO), Barcelona, Spain. [10]Mayo Clinic, Rochester, Minnesota, USA. [11]Netherlands Cancer Institute and Amsterdam University Medical Centers, Amsterdam, The Netherlands. [12]Erasme Hospital, Université Libre de Bruxelles (U.L.B.), Brussels, Belgium. [13]Medical School, Geneva University Hospital, Geneva, Switzerland, European School of Oncology, Milan Italy. [14]European Institute of Oncology IRCCS, European School of Oncology, Milan, Italy

GS3-09

Chances of Pregnancy
Breast Cancer Survivors

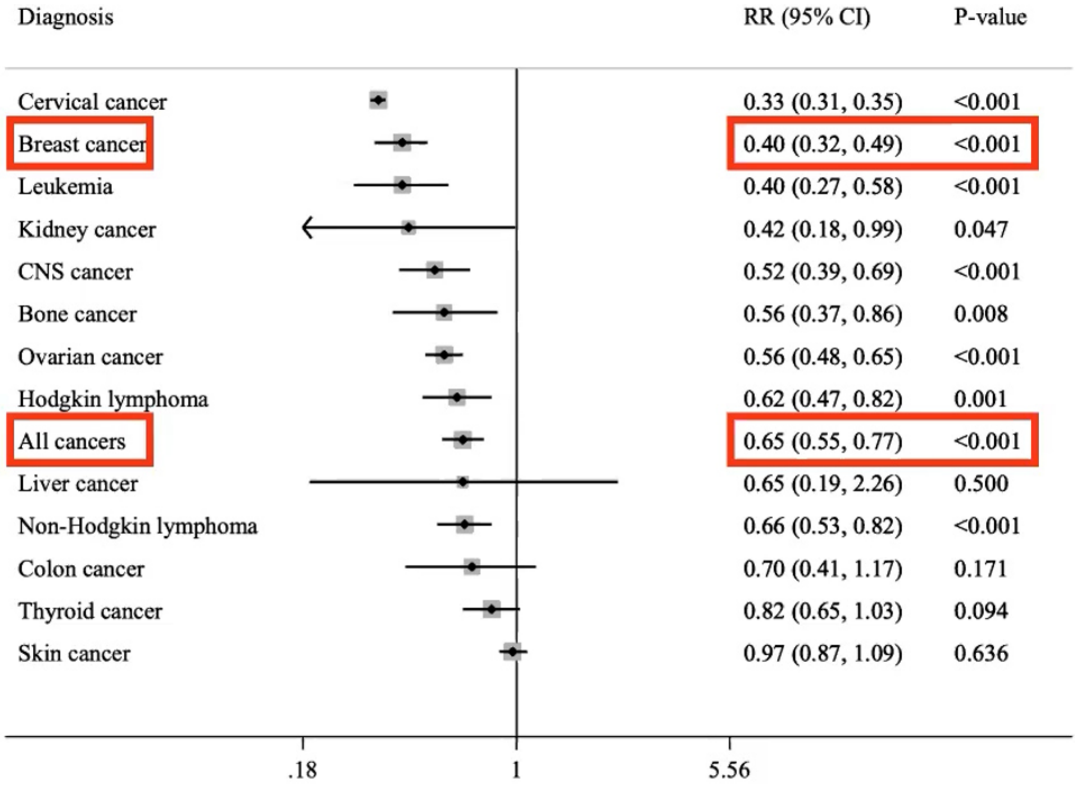




RR 0.40 (95% CI 0.32-0.49); p<0.001

Chances of Pregnancy

All Cancer Survivors

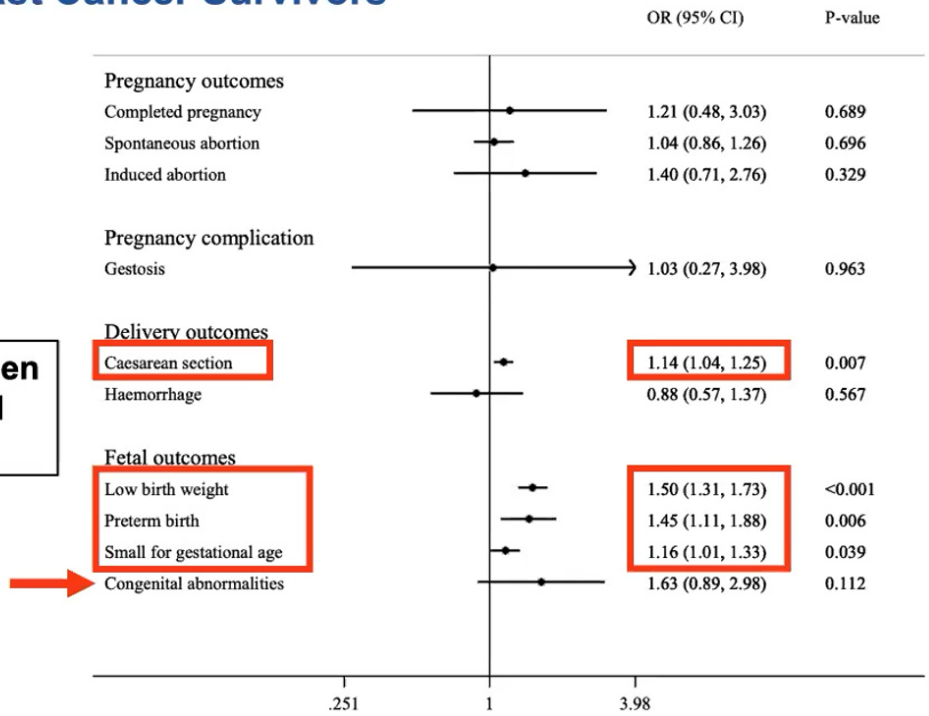


Reproductive Outcomes
Breast Cancer Survivors

9 included records

3,240 breast cancer patients

4,814,452 women from general population



Reproductive Outcomes
Breast Cancer Survivors

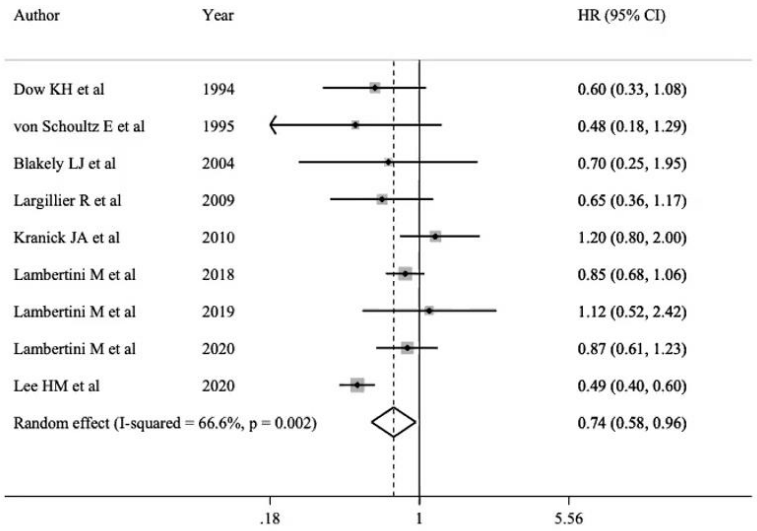
Subgroup analysis	Low birth weight PR (95%CI)	Preterm birth PR (95%CI)	Small for gestational age PR (95%CI)
Treatment received			
Chemotherapy	1.62 (1.08-2.42)	1.60 (0.84-3.05)	1.51 (1.22-2.88)
No chemotherapy	1.05 (0.77-1.43)	1.16 (0.90-1.49)	0.85 (0.53-1.36)
Pregnancy interval*			
Early pregnancy	1.47 (0.66-3.28)	1.59 (0.60-4.24)	1.13 (0.75-1.69)
Late pregnancy	1.25 (0.97-1.62)	1.21 (0.96-1.53)	1.34 (1.05-1.71)

*The cut-off used in the studies ranged between 2 years and 5 years

Maternal Safety

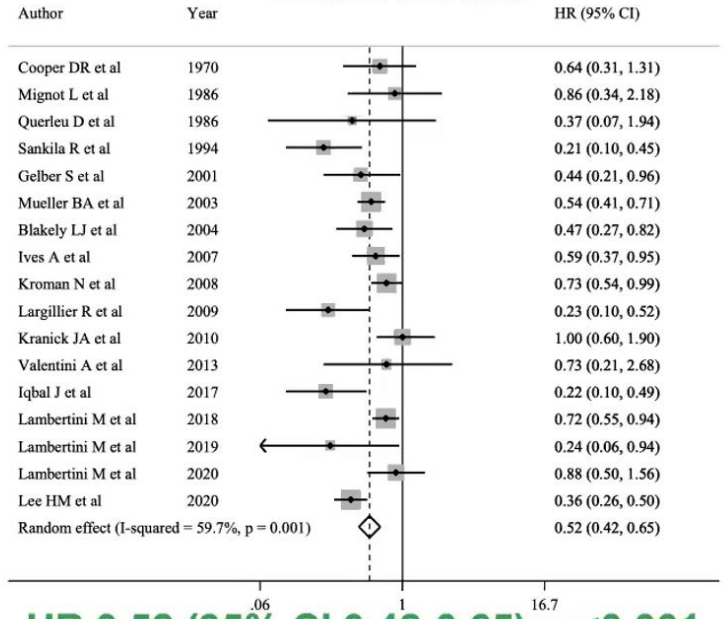
Studies Adjusting for the Potential «Guarantee-time Bias»

Disease-free Survival



HR 0.74 (95% CI 0.58-0.96); p=0.023

Overall Survival



HR 0.52 (95% CI 0.42-0.65); p<0.001

OFFICIAL

best of SABCS®

Oncogenetics / Supportive care / Risk prevention

Pr François Duhoux
Medical Oncology and Center for Human Genetics
Cliniques universitaires Saint-Luc

Glycemic Index, Glycemic Load and breast cancer risk: results from the prospective NutriNet-Santé cohort

Charlotte Debras, Eloi Chazelas, Bernard Srour, Chantal Julia, Emmanuelle Kesse-Guyot, Laurent Zelek, Cédric Agaësse, Nathalie Druesne-Pecollo, Valentina A. Andreeva, Pilar Galan, Serge Hercberg, Paule Latino-Martel, Mélanie Deschasaux-Tanguy, Mathilde Touvier

Nutritional Epidemiology Research Team (EREN)
UMR U1153 Inserm / U1125 Inrae / Cnam / Sorbonne Paris Nord
Center of Research in Epidemiology and Statistics University of Paris

Funding: Institut National du Cancer (INCa) 2019 (Doctoral scholarship n°2019-158 – C Debras)

GS2-07

- **NutriNet-Santé cohort study**
  - **E-cohort – France – since 2009 (open recruitment) > 171,000 participants**
  - **Online self-administered questionnaires repeated every 6 months : sociodemographic, lifestyle, health status, physical activity, three 24h-dietary records**
  - **Cancer cases validated by an expert medical committee**
- **Study population**
  - **Exclusion criteria:**
    - **Prevalent cancer or T1D/T2D at baseline**
    - **<3 24h-dietary records over the first 2 years of follow-up**
    - **Null follow-up**

	Cancer all sites (*3131 cases*)			Breast (*927 cases*)		
	HR $_{Q5 vs. Q1}$	95% CI	P	HR $_{Q5 vs. Q1}$	95% CI	P
Average dietary GI	1.12	0.99-1.27	0.09	1.21	0.96-1.54	0.1
Dietary GL	**1.25**	**1.03-1.52**	**0.008**	1.29	0.90-1.84	0.1
Contribution of low GI foods to caloric intake	**0.83**	**0.74-0.94**	**0.005**	**0.78**	**0.62-0.99**	**0.07**
Contribution of medium-to-high GI foods to caloric intake	**1.21**	**1.07-1.38**	**0.002**	**1.34**	**1.05-1.71**	**0.04**
Contribution of low GI foods to carbohydrate intake	**0.80**	**0.71-0.91**	**0.0006**	**0.74**	**0.59-0.92**	**0.02**
Contribution of medium to high GI foods to carbohydrate intake	**1.27**	**1.13-1.44**	**0.0001**	**1.48**	**1.18-1.86**	**0.002**

Significant for premenopausal breast cancer (*297 cases*)

Significant for postmenopausal breast cancer (*525 cases*)

GI = glycemic index; GL = glycemic load

Association independent of BMI and weight gain : inflammation, oxidative stress, increased insulin levels, …

Diabetes Risk Reduction Diet and Survival Following Breast Cancer

Tengteng Wang, PhD, MSPH, MBBS
Postdoctoral Research Fellow
Channing Division of Network Medicine, Brigham and Women's Hospital
Harvard Medical School & Harvard School of Public Health

BRIGHAM HEALTH
BWH BRIGHAM AND WOMEN'S HOSPITAL

HARVARD MEDICAL SCHOOL

HARVARD T.H. CHAN

GS2-09

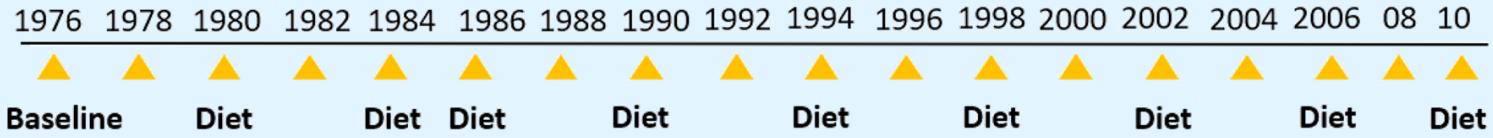
Diabetes risk reduction diet (DRRD) score

- **Emphasizes nine different dietary factors:**
  - **Higher intakes of cereal fiber, coffee, nuts, polyunsaturated:saturated fat ratio, and whole fruits**
  - **Lower glycemic index, lower intakes of trans fat, sugar-sweetened beverages/fruit juices, and red meat**

Study Design and Population

Nurses' Health Study

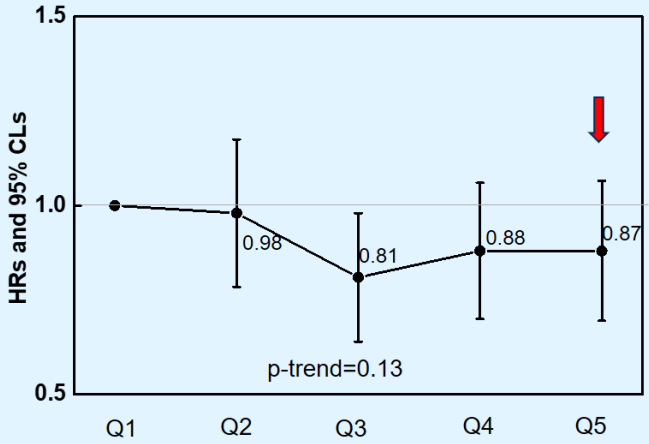
Nurses' Heath Study (n=121,700)



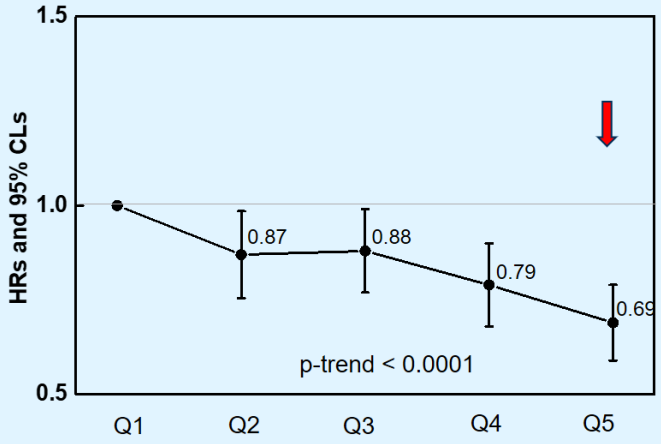
- Study subjects: stage I–III breast cancer
- Exposure: cumulative average DRRD score based on multiple updated dietary measurements
- Mortality outcomes: breast cancer and all-cause mortality

Nurses' Heath Study II (n=116,000)

Results:
Post-diagnosis DRRD and mortality



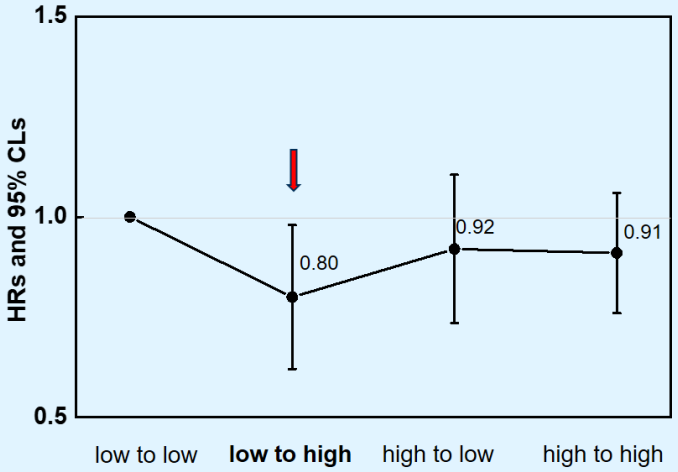
Breast cancer-specific mortality



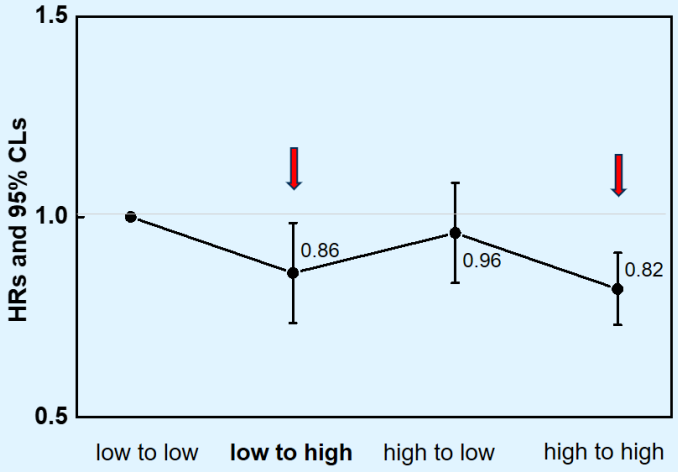
All-cause mortality

Results did not differ by breast tumor ER status or stage

Results:
Changes from pre- to post-diagnosis and mortality



Breast cancer-specific mortality



All-cause mortality

Results did not differ by breast tumor ER status or stage

→ Promoting dietary changes consistent with prevention of T2D may be important for breast cancer survivors.

Updated long-term results of anastrozole versus tamoxifen for the prevention of breast cancer in postmenopausal women with locally excised Ductal Carcinoma In-Situ (IBIS-II DCIS)

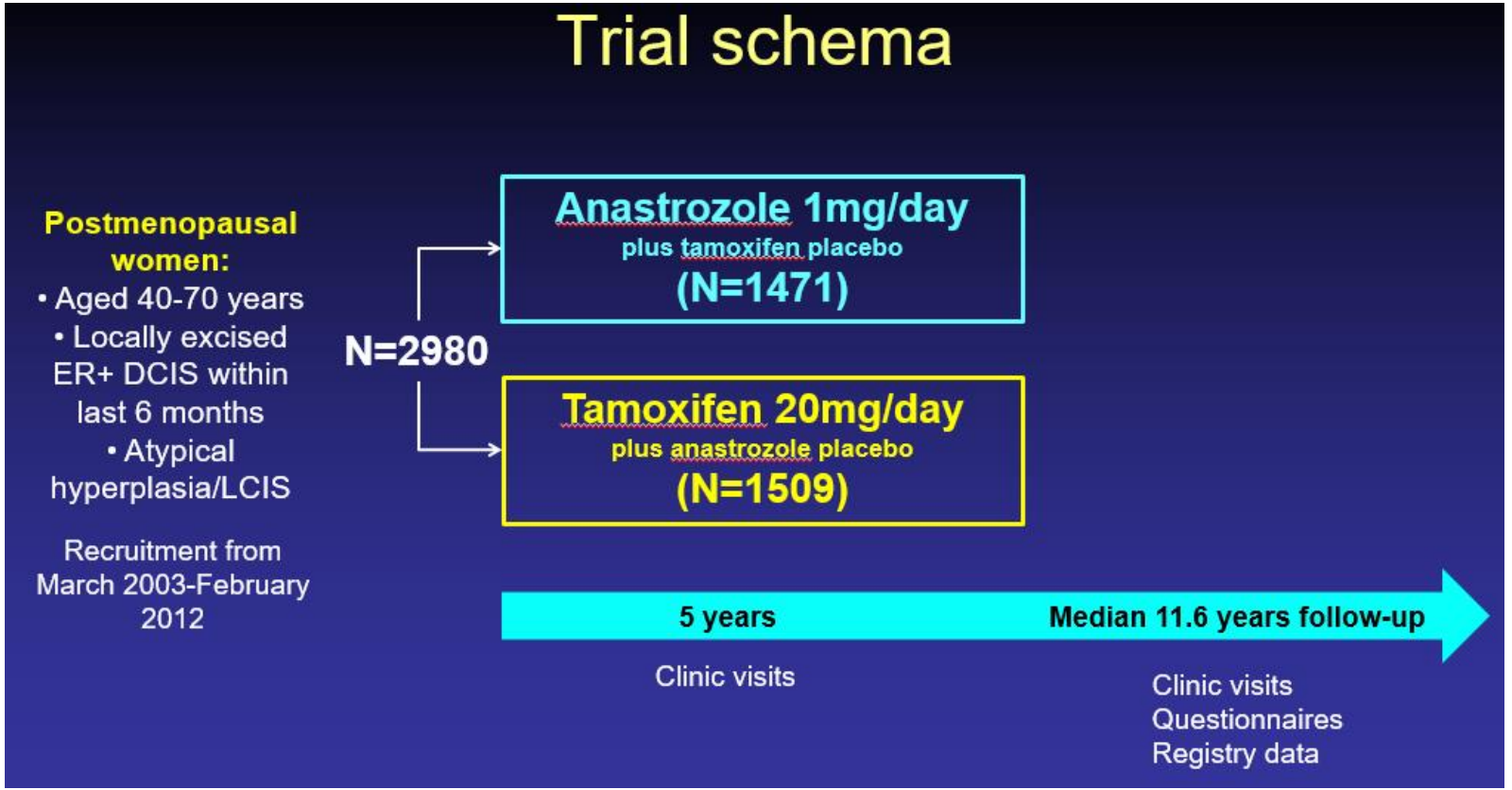
Ivana Sestak[1], Jack Cuzick[1], Bernardo Bonanni[2], Nigel Bundred[3], Christelle Levy[4], Sibylle Loibl[5], Patrick Neven[6], Michael Stierer[7], Chris Holcombe[8], Robert E. Coleman[9], John F. Forbes[10], Anthony Howell[11]

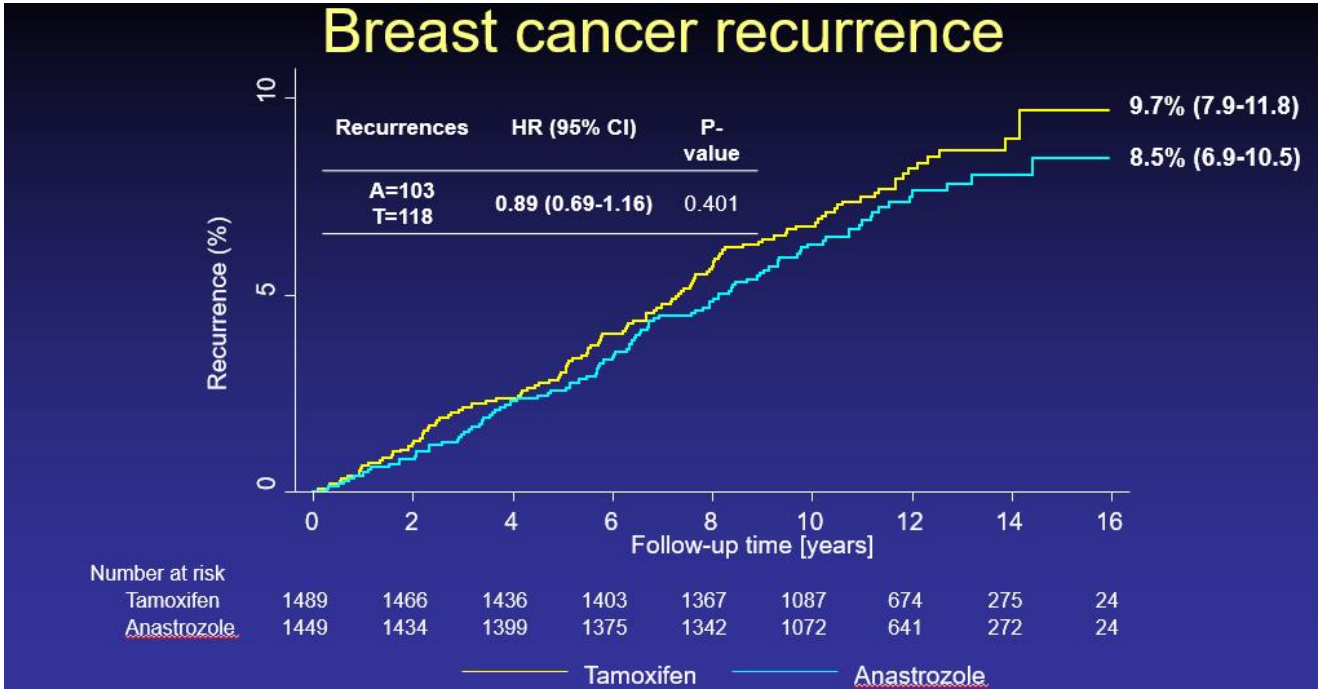
on behalf of the IBIS-II investigators

1. Wolfson Institute of Preventive Medicine, Queen Mary University London, London, UK
2. Division of Chemoprevention and Genetics, European Institute of Oncology, Milan, Italy
3. South Manchester University Hospital, Manchester, UK
4. Centre François Baclesse, Caen, France
5. German Breast Group, Frankfurt, Germany
6. University of Leuven, Leuven, Belgium
7. Austrian Breast and Colorectal Cancer Study Group, Vienna, Austria
8. Royal Liverpool University Hospital, Liverpool, UK
9. Weston Park Hospital, Sheffield, UK
10. University of Newcastle, Newcastle, Australia
11. Nightingale Breast Screening Centre, Manchester University NHS Foundation Trust, Manchester, UK

GS2-02

Trial schema





	Invasive			DCIS		
	A vs. T	HR (95% CI)	P-value	A vs. T	HR (95% CI)	P-value
All	**66 vs. 76**	**0.89 (0.64-1.24)**	**0.48**	**36 vs. 42**	**0.88 (0.56-1.37)**	**0.56**
Ipsilateral	37 vs. 39	0.97 (0.62-1.52)	0.9	23 vs. 25	0.94 (0.53-1.66)	0.83
Contralateral	28 vs. 33	0.87 (0.52-1.43)	0.57	12 vs. 15	0.82 (0.38-1.75)	0.61

OFFICIAL best of SABCS

San Antonio Breast Cancer Symposium® - December 8-11, 2020

Influence of physician's lifestyle on the prescription of healthy habits to breast cancer patients (LACOG 1218)

Renata Cangussú[1], Eldsamira Mascarenhas[1], Taiane F Rebelatto[2], Paulo R Nunes[2], Rafaela G de Jesus[2], Facundo Zaffaroni[2] and Gustavo Werutsky[2].
[1]Oncologia D`or - Hospital Cardiopulmonar, Salvador, Brazil [2] Latin American Cooperative Oncology Group, Porto Alegre, Brazil

PS7-91

Table 1. Physicians characteristics and advice on the importance of lifestyle modification for BC patients

			MULTIVARIABLE ANALYSIS		
Parameter	Levels	Do not advice about life style (%)	Relative Risk	95% confidence interval	p-value
Do you personally practice physical activity?					0.0265
	Yes	31 (13.1)	1.00		
	No	11 (35.5)	2.48	1.28 to 4.82	

Physicians characteristics and reference to dietitian or endocrinologist on obesity management for BC patients

More likely to refer if :

			MULTIVARIABLE ANALYSIS		
Parameter	Levels	Do not refer to a dietitian or endocrinologist (%)	Relative Risk	95% confidence interval	p-value
Gender					0.0296
	Female	66 (42.3)	1.00		
	Male	53 (47.7)	1.35	1.03 to 1.76	
Age (years)					0.0005
	30 - 49	105 (49.3)	1.00		
	≥ 50	14 (25.9)	0.46	0.28 to 0.75	
Do you treat breast cancer?					0.0692
	Yes	114 (43.8)	1.00		
	No	5 (71.4)	2.38	1.33 to 4.26	
Do you personally follow the recommendations of eating habits?					0.4311
	Yes	100 (43.9)	1.00		
	No	19 (48.7)	1.15	0.83 to 1.60	
Do you personally practice physical activity?					0.3851
	Yes	103 (43.6)	1.00		
	No	16 (51.6)	1.18	0.82 to 1.71	
Do you consume alcohol?					0.1320
	Yes	101 (47.6)	1.00		
	No	18 (32.7)	0.75	0.50 to 1.11	
Do you smoke?					0.1488
	Yes	2 (25.0)	1.00		
	No	117 (45.2)	1.84	0.69 to 4.94	
Avarage sleep time per day					0.4283
	< 5h	6 (54.5)	1.00		
	Between 5 - 7h	16 (36.4)	0.59	0.30 to 1.17	
	> 7h	97 (45.7)	0.66	0.38 to 1.17	
What is your BMI?					0.1031
	<25	83 (47.7)	1.00		
	≥ 25	36 (38.7)	0.80	0.61 to 1.05	