

# Peut-on se passer de chimiothérapie adjuvante dans une tumeur triple négative ?

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# Liens d'intérêt

- Eisai
- Genomic Health
- Novartis
- Pfizer
- Roche

Les données historiques

# Effects of chemotherapy and hormonal therapy for early breast cancer on recurrence and 15-year survival: an overview of the randomised trials

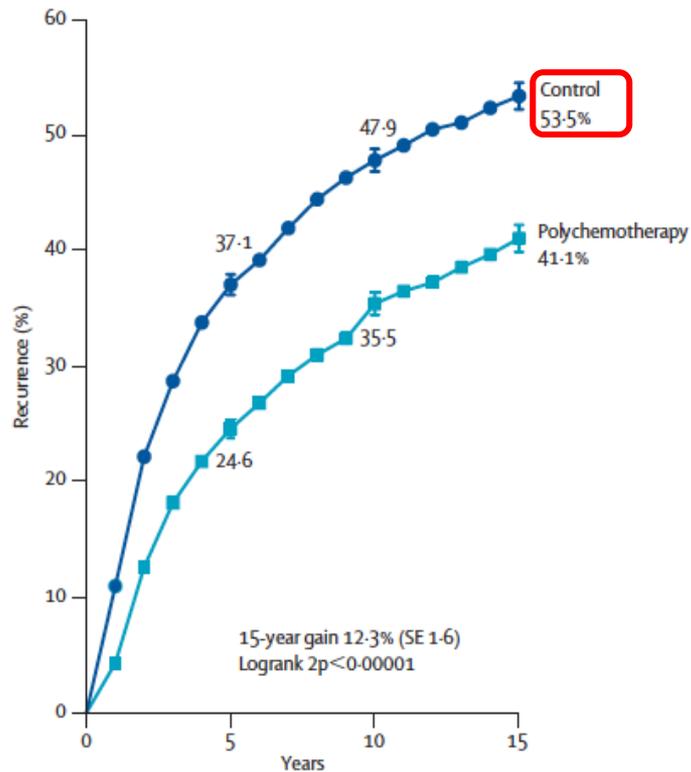
Early Breast Cancer Trialists' Collaborative Group (EBCTCG)\*

Lancet 2005; 365: 1687–1717

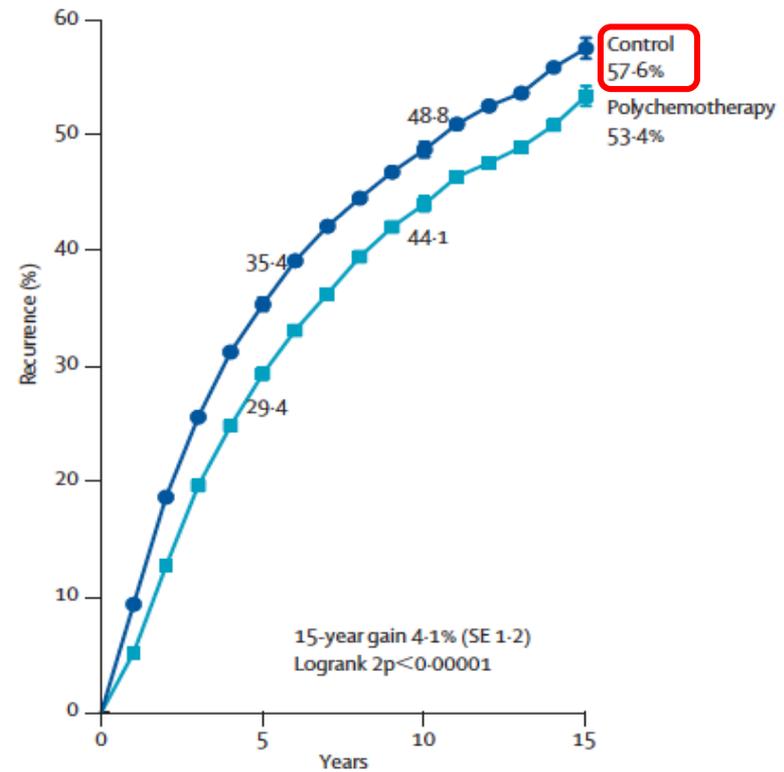
	Available*		Unavailable† (%)	
	Trials	Deaths/women by year 2000	Trials	Women randomised by year 2000
<b>Cytotoxic chemotherapy (CT)‡</b>				
Single-agent CT vs Not	14	2114/3994	0	0
PolyCT vs Not	60	10 173/28 764	7	1862 (6%)
Longer vs shorter polyCT	11	2567/6125	2	426 (7%)
Anthracycline vs CMF-based CT	17	4044/14 470	6	1269 (8%)
<b>Tamoxifen (Tam)‡</b>				
1–2 years of Tam vs Not	44	13 914/33 209	6	~1600 (5%)
About 5 years of Tam vs Not	12	4071/15 017	6	~5000 (25%)
Longer vs shorter Tam	15	5984/32 047	0	0
<b>Ovarian ablation/suppression‡</b>				
Ablation vs Not	15	3006/6506	2	158 (2%)
Suppression vs Not	6	832/4807	5	3247 (40%)
Total in present report	194	46 705/144 939	34	~13 000 (9%)

# Survie sans rechute en fonction de l'âge

Entry age <50 years: recurrence

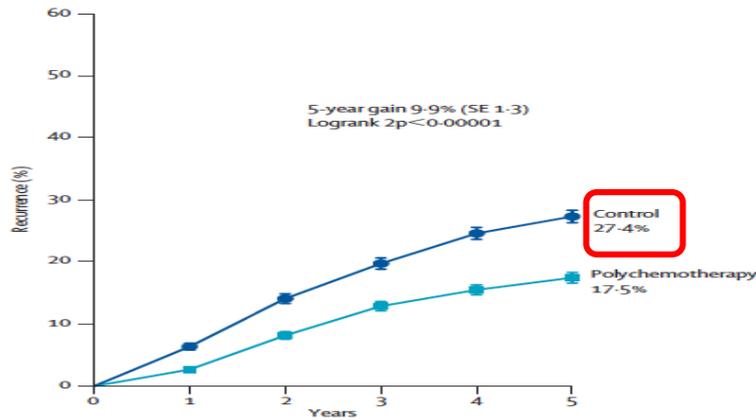


Entry age 50–69 years: recurrence

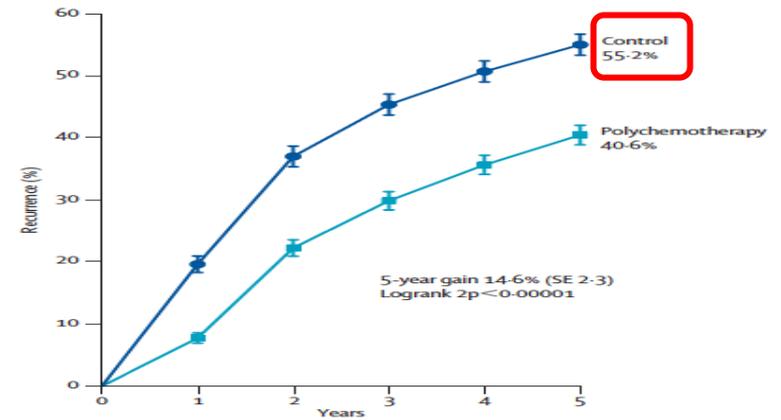


# Survie sans rechute en fonction de l'âge et du statut ganglionnaire

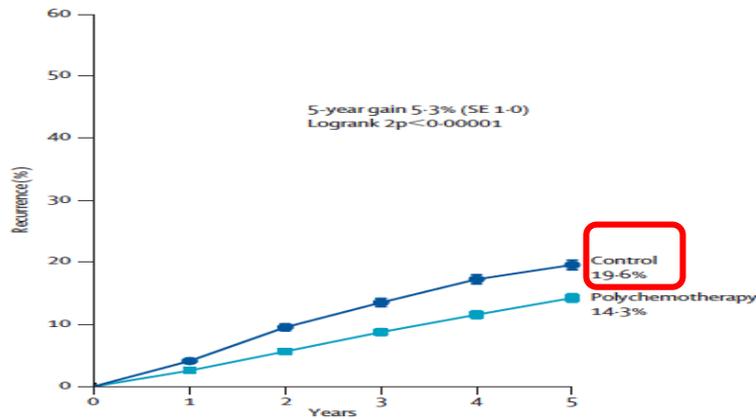
Entry age <50 years: node-negative



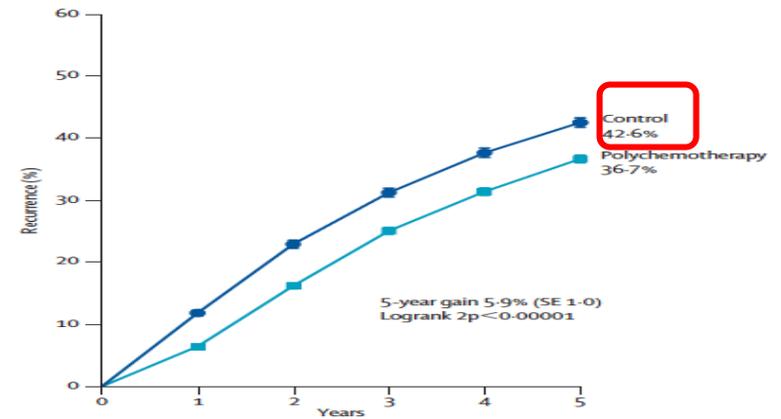
Entry age <50 years: node-positive



Entry age 50-69 years: node-negative

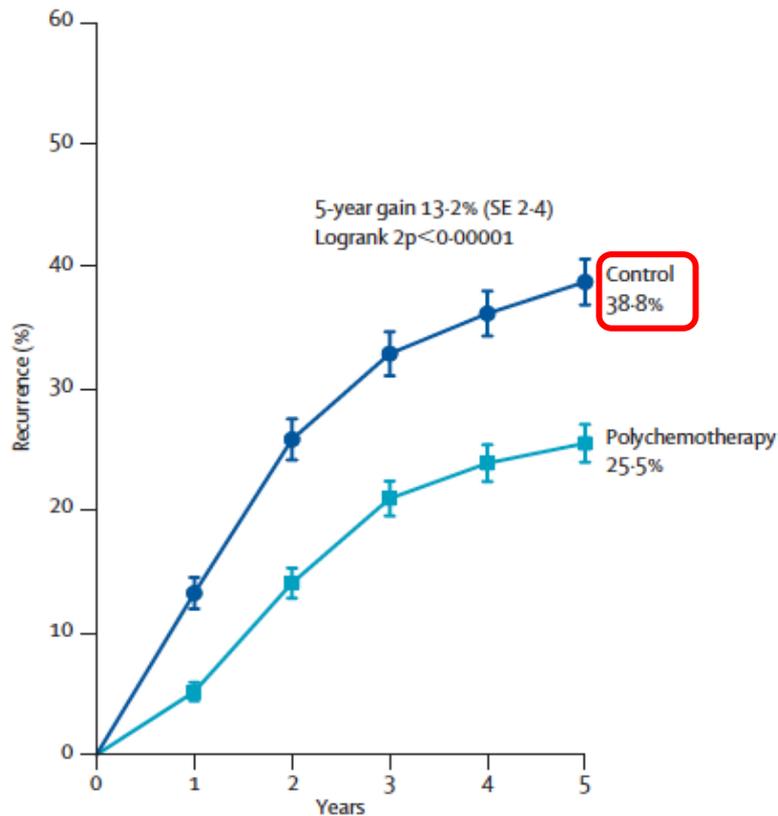


Entry age 50-69 years: node-positive

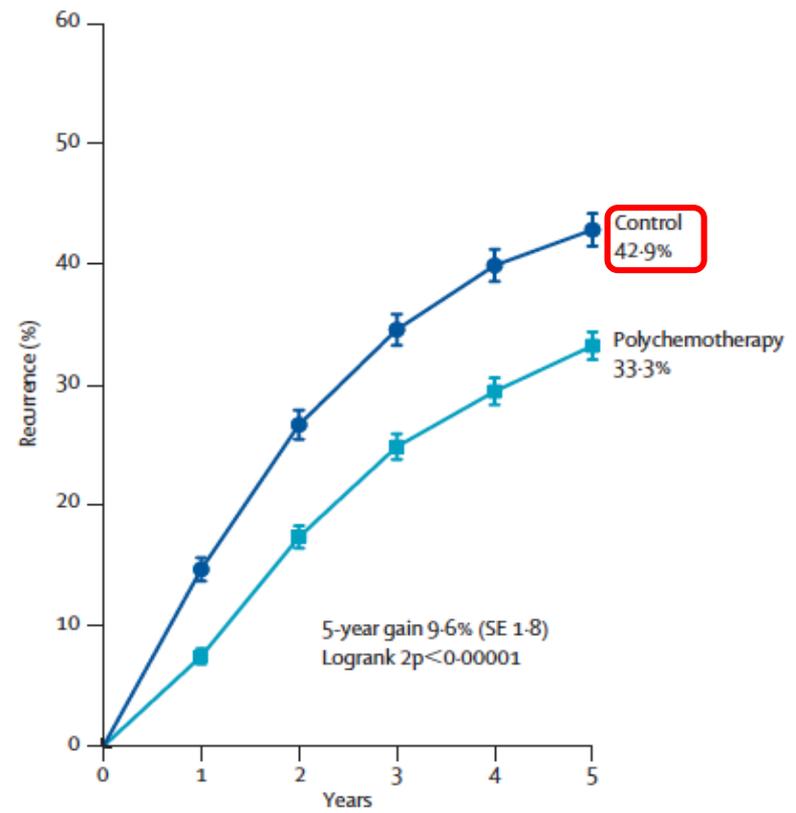


# Survie sans rechute en fonction de l'âge chez les patientes RE faibles

Entry age <50 years, ER-poor: polychemotherapy vs not  
(1757 women: 20% node-positive)



Entry age 50-69 years, ER-poor: polychemotherapy vs not  
(4071 women: 66% node-positive)



# Impact des traitements systémiques adjuvant sur la survie sans rechute en fonction du statut des RE et de l'âge

Entry age <50 years: recurrence/woman-years

Category	Events/woman-years		Polychemotherapy events		Ratio of annual event rates Polychemotherapy : Control
	Allocated poly-chemotherapy	Adjusted control	Logrank O-E	Variance of O-E	

(c) ER status and tamoxifen ((ii) vs (v):  $\chi^2_1=0.9$ ;  $2p>0.1$ ; NS)

Polychemotherapy alone vs nil

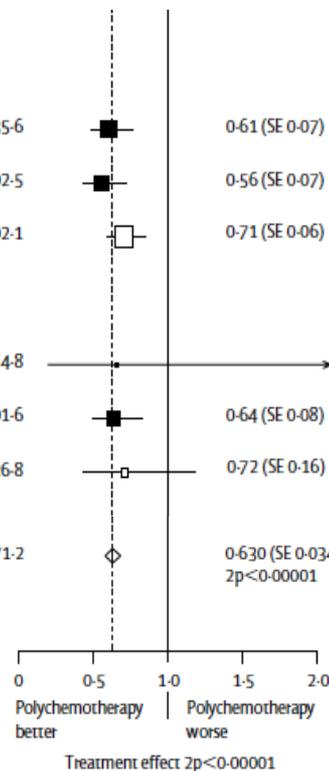
(i) ER-poor	272/6904 (3.9%/y)	358/5326 (6.7%/y)	-67.1	135.6	0.61 (SE 0.07)
(ii) ER-positive	198/3863 (5.1%/y)	292/3244 (9.0%/y)	-59.5	102.5	0.56 (SE 0.07)
(iii) Unknown	484/7175 (6.7%/y)	507/5556 (9.1%/y)	-69.7	202.1	0.71 (SE 0.06)

Polychemotherapy + tamoxifen vs tamoxifen only

(iv) ER-poor	14/251 (5.6%/y)	19/265 (7.2%/y)	-2.0	4.8	0.64 (SE 0.08)
(v) ER-positive	192/7239 (2.7%/y)	288/7019 (4.1%/y)	-45.2	101.6	0.72 (SE 0.16)
(vi) Unknown	68/1264 (5.4%/y)	60/822 (7.3%/y)	-8.9	26.8	

<b>Total</b>	1228/ 26699 (4.6%/y)	1524/ 22241 (6.9%/y)	-263.8	571.2	0.630 (SE 0.034) $2p<0.00001$
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■ 99% or ◊ 95% CIs



Entry age 50-69 years: recurrence/woman-years

Category	Events/woman-years		Polychemotherapy events		Ratio of annual event rates Polychemotherapy : Control
	Allocated poly-chemotherapy	Adjusted control	Logrank O-E	Variance of O-E	

(c) ER status and tamoxifen ((ii) vs (v):  $\chi^2_1=0.0$ ;  $2p>0.1$ ; NS)

Polychemotherapy alone vs nil

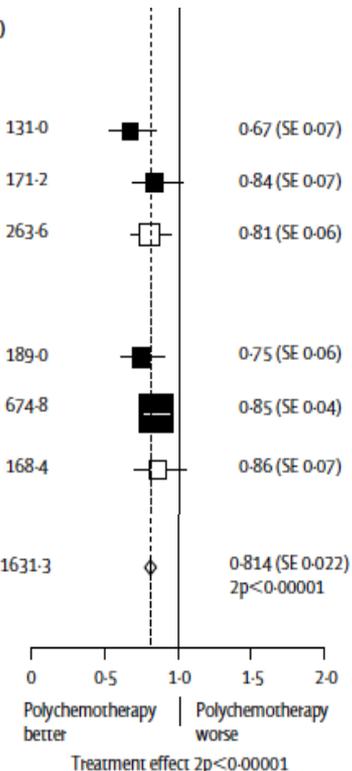
(i) ER-poor	282/5641 (5.0%/y)	363/4859 (7.5%/y)	-51.5	131.0	0.67 (SE 0.07)
(ii) ER-positive	376/5156 (7.3%/y)	434/5051 (8.6%/y)	-30.0	171.2	0.84 (SE 0.07)
(iii) Unknown	625/6876 (9.1%/y)	665/5971 (11.1%/y)	-56.9	263.6	0.81 (SE 0.06)

Polychemotherapy + tamoxifen vs tamoxifen only

(iv) ER-poor	595/8184 (7.3%/y)	652/6842 (9.5%/y)	-54.8	189.0	0.75 (SE 0.06)
(v) ER-positive	1734/34490 (5.0%/y)	2093/34437 (6.1%/y)	-112.2	674.8	0.85 (SE 0.04)
(vi) Unknown	363/4903 (7.4%/y)	415/4794 (8.7%/y)	-25.1	168.4	0.86 (SE 0.07)

<b>Total</b>	3975/ 65319 (6.1%/y)	4622/ 62032 (7.5%/y)	-335.3	1631.3	0.814 (SE 0.022) $2p<0.00001$
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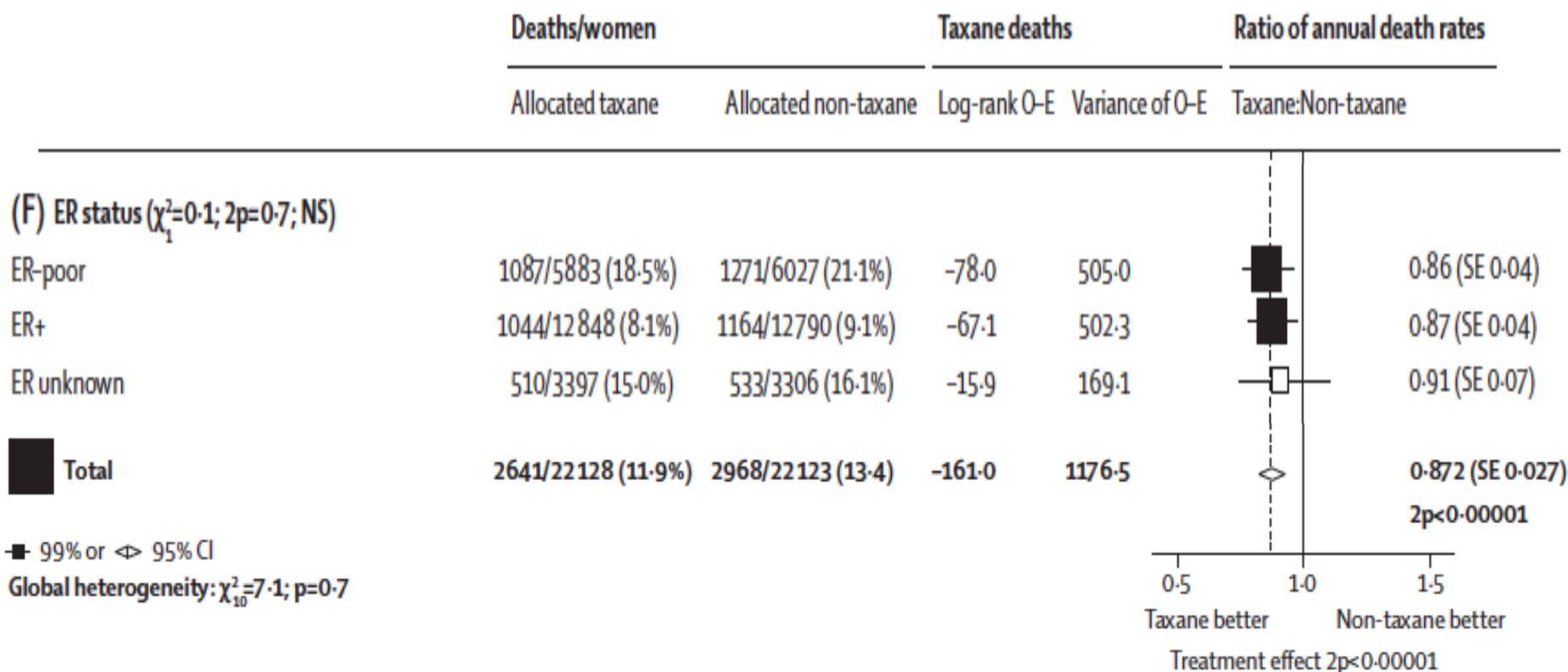
■ 99% or ◊ 95% CIs



# Comparisons between different polychemotherapy regimens for early breast cancer: meta-analyses of long-term outcome among 100 000 women in 123 randomised trials

Early Breast Cancer Trialists' Collaborative Group (EBCTCG)

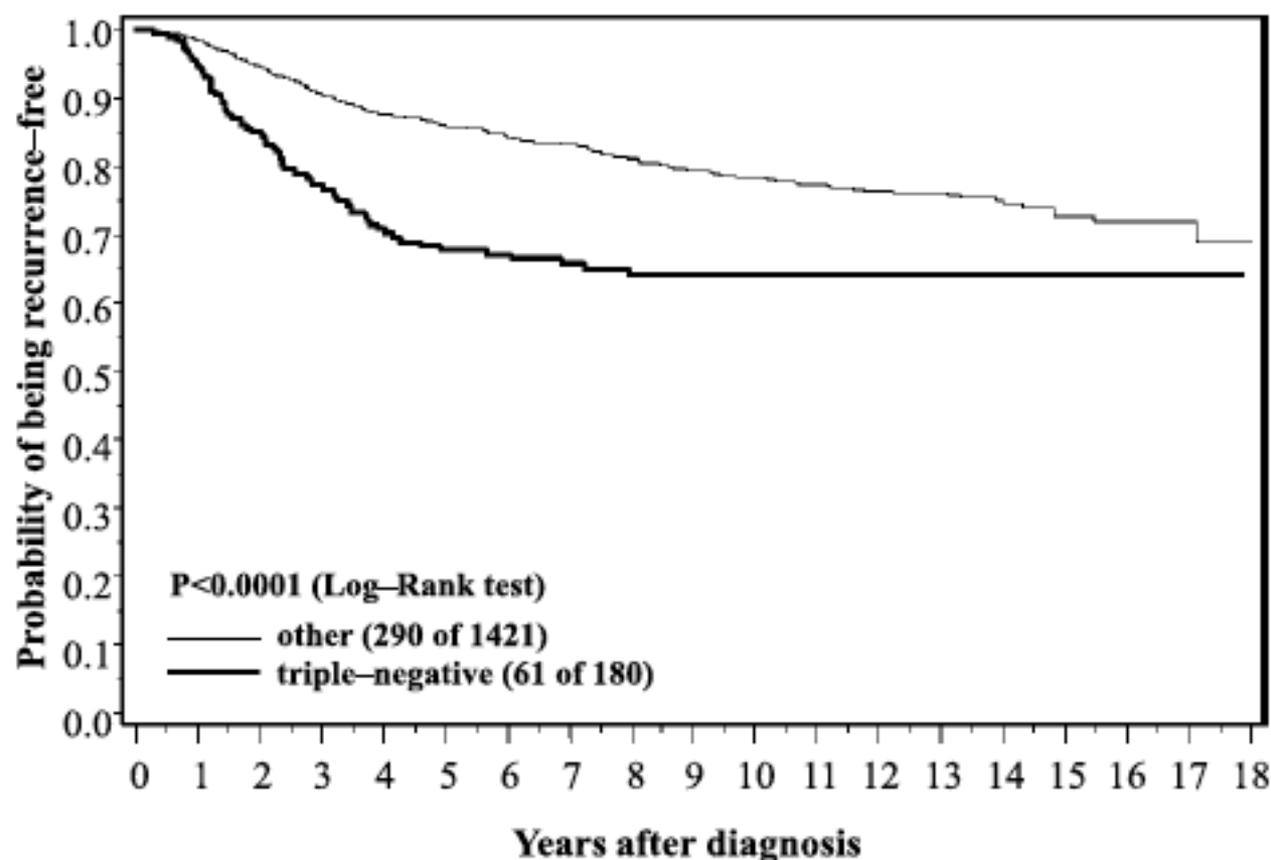
Lancet 2012; 379: 432-44



# Triple-Negative Breast Cancer: Clinical Features and Patterns of Recurrence

Rebecca Dent,<sup>1</sup> Maureen Trudeau,<sup>1</sup> Kathleen I. Pritchard,<sup>1</sup> Wedad M. Hanna,<sup>1</sup> Harriet K. Kahn,<sup>1</sup> Carol A. Sawka,<sup>1</sup> Lavina A. Lickley,<sup>1</sup> Ellen Rawlinson,<sup>2</sup> Ping Sun,<sup>2</sup> and Steven A. Narod<sup>2</sup>

Clin Cancer Res 2007;13(15) August 1, 2007



# Conclusion 1

- Les données de la méta-analyse de l'EBCTCG permettent de conclure que
  - Près de 50% des patientes n'ayant pas eu de traitement adjuvant sont toujours en vie sans rechute à 25 ans
  - Plus de 70% des pN0 et 40% des pN+ sans chimiothérapie à 5ans
  - Près de 60% des « RE faibles » sans chimiothérapie à 5 ans
- Si l'on assimile la population de la méta-analyse de l'EBCTCG «RE faible» comme regroupant une partie de la population actuelle HER2 positive et la population triple négative, alors cela veut dire qu'une partie de cette population n'a pas besoin de chimiothérapie
- Par ailleurs, la population qui en bénéficie est inférieure à celle qui est traitée puisque 1/4 à 1/3 des patientes « RE faibles » ayant reçues une chimiothérapie va tout de même rechutée
- Le risque de rechute est essentiellement important les premières années

Cancers « triple négatifs »  
définitions et pronostiques ?

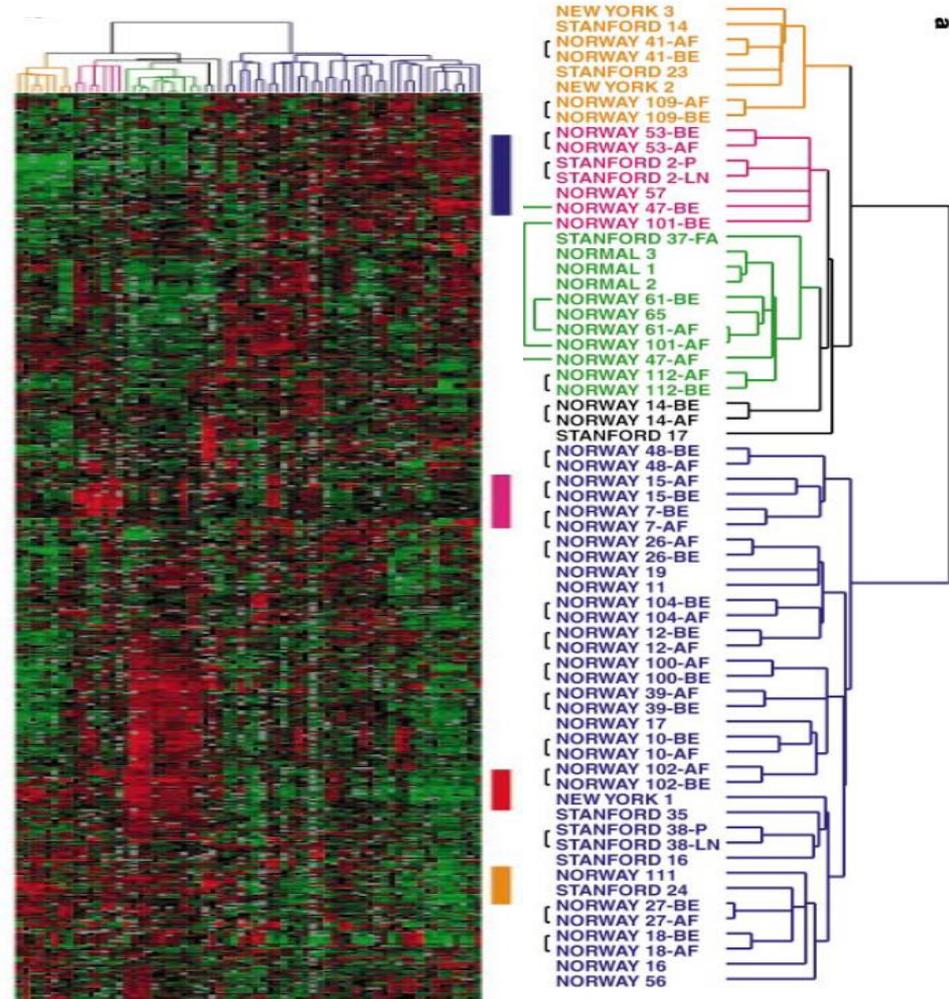
# Définition « moléculaire »

## Molecular portraits of human breast tumours

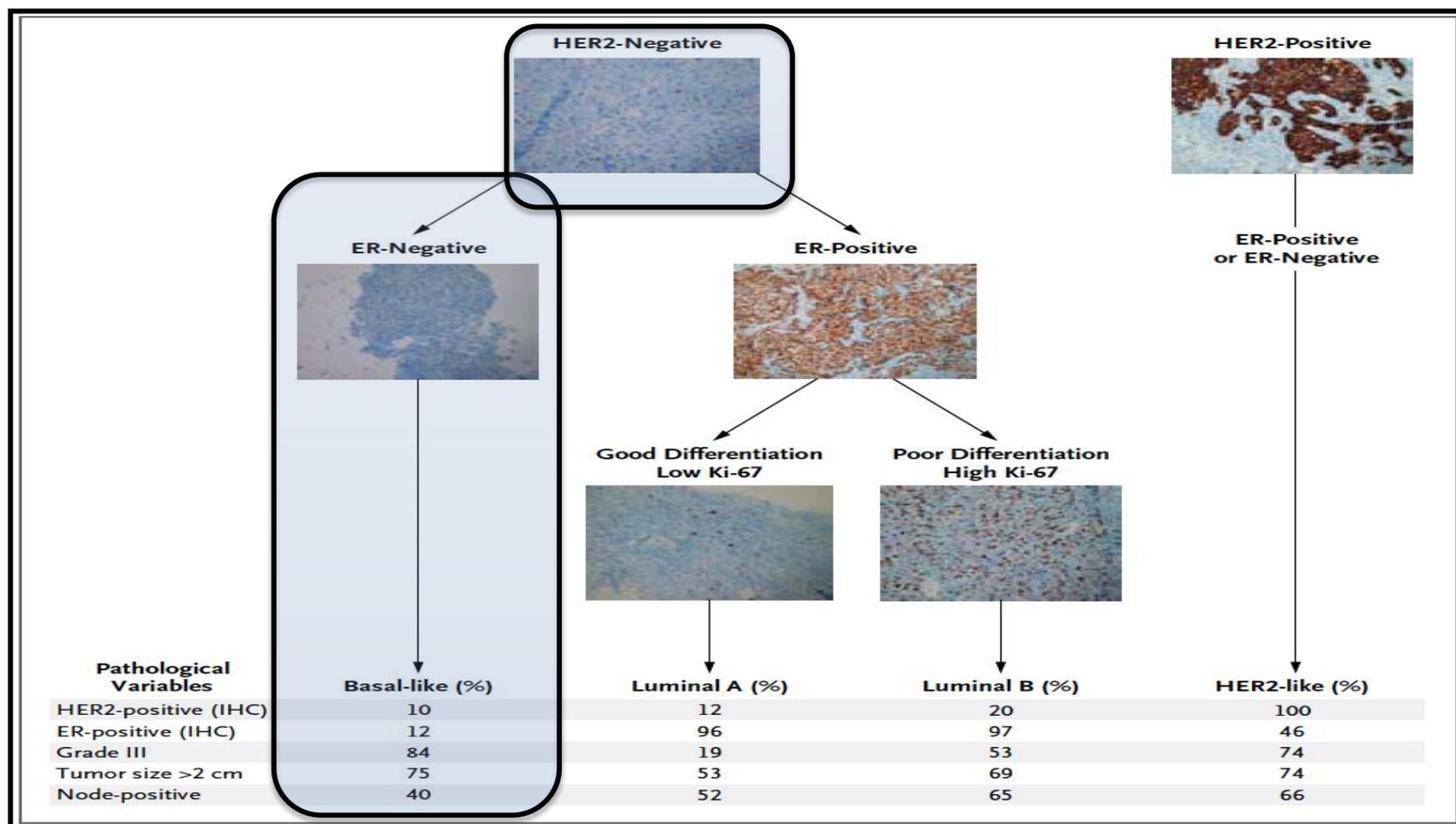
Charles M. Perou\*†, Therese Sørlie†‡, Michael B. Eisen\*,  
Matt van de Rijn§, Stefanie S. Jeffrey||, Christian A. Rees\*,  
Jonathan R. Pollack¶, Douglas T. Ross¶, Hilde Johnsen‡,  
Lars A. Akslen#, Øystein Fluge☆, Alexander Pergamenschikov\*,  
Cheryl Williams\*, Shirley X. Zhu§, Per E. Lønning\*\*,  
Anne-Lise Børresen-Dale‡, Patrick O. Brown¶†† & David Botstein\*

NATURE | VOL 406 | 17 AUGUST 2000 | www.nature.com

« Basal-like » cancers  
are associated with bad prognosis and  
are frequently ER and HER2 negative:  
Triple negative ?



# Une “approximation” discutable



# Deconstructing the molecular portraits of breast cancer

Alex Prat<sup>a,b,c</sup>, Charles M. Perou<sup>a,b,c,\*</sup>

<sup>a</sup>Lineberger Comprehensive Cancer Center, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599, USA

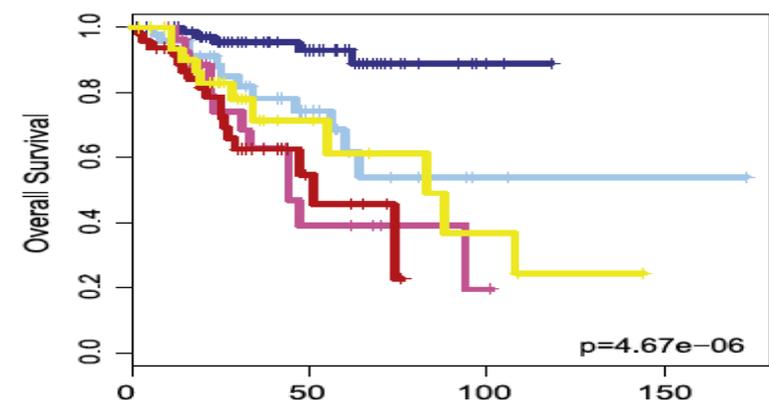
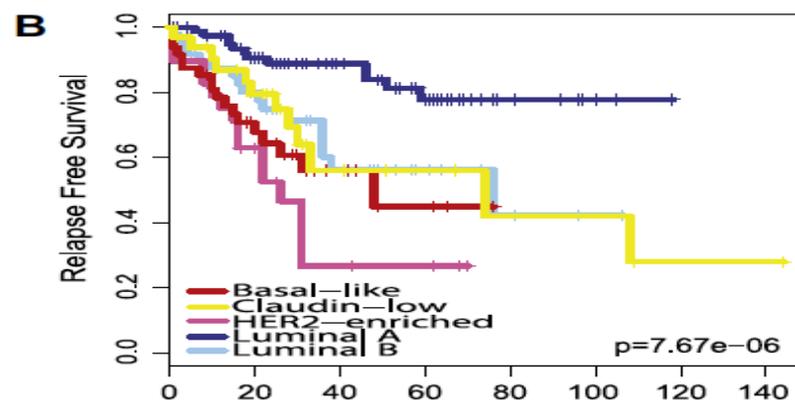
<sup>b</sup>Department of Genetics, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599, USA

<sup>c</sup>Department of Pathology & Laboratory Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599, USA

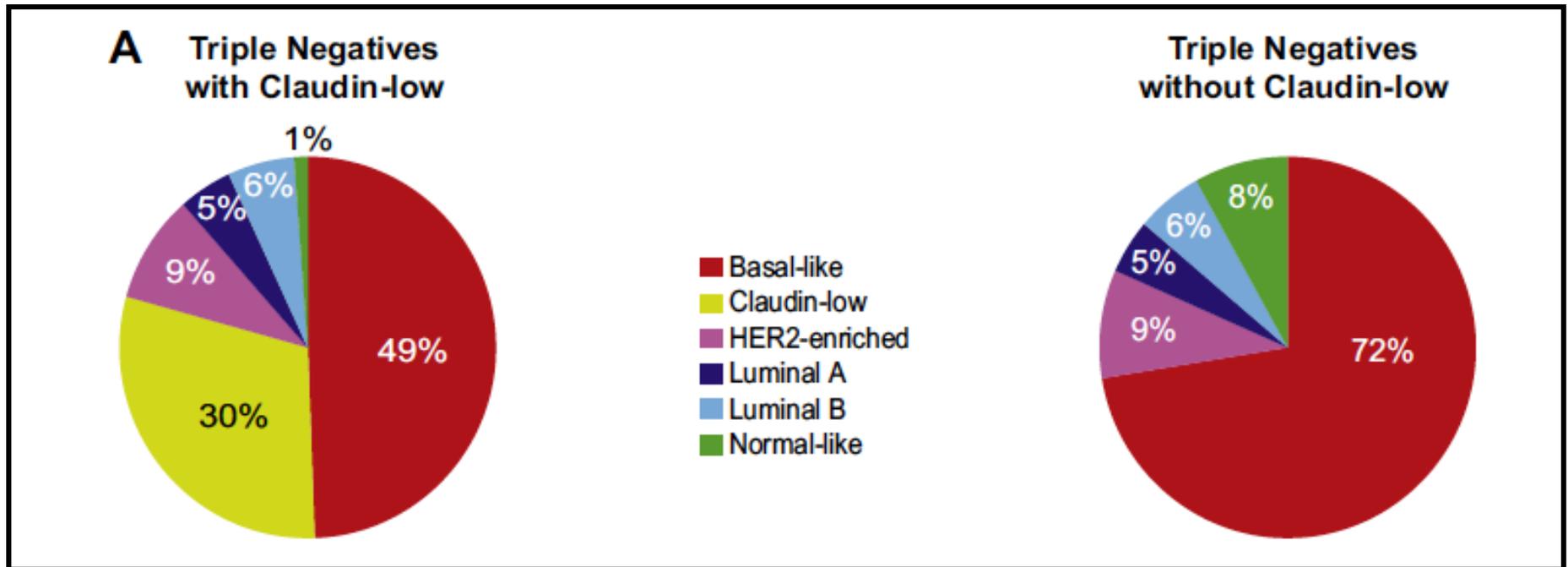
MOLECULAR ONCOLOGY 5 (2011) 5–23

**A**

	Claudin-low			Basal-like			HER2-enriched			Luminal B			Luminal A			Normal-like		
	UNC	NKI	MDACC	UNC	NKI	MDACC	UNC	NKI	MDACC	UNC	NKI	MDACC	UNC	NKI	MDACC	UNC	NKI	MDACC
	Num. Patients	37	21	18	73	42	15	39	49	28	62	69	27	99	84	37	10	30
Prevalence	12%	7%	14%	23%	14%	11%	12%	17%	21%	19%	23%	20%	31%	28%	28%	3%	10%	6%
ER+	12%	33%	22%	11%	19%	0%	36%	59%	29%	91%	100%	96%	91%	100%	97%	44%	93%	100%
PR+	23%	-	22%	6%	-	13%	30%	-	25%	53%	-	41%	74%	-	70%	22%	-	63%
HER2+	22%	-	6%	9%	-	13%	66%	-	71%	24%	-	15%	8%	-	11%	67%	-	25%
HER2-/ER-	70%	-	72%	82%	-	87%	25%	-	18%	8%	-	4%	6%	-	3%	13%	-	0%
HER2-/ER-/PR-	71%	-	61%	80%	-	73%	22%	-	14%	9%	-	4%	4%	-	3%	0%	-	0%
Node-Grade 3	58%	48%	28%	63%	60%	20%	26%	47%	21%	44%	42%	33%	51%	58%	41%	33%	50%	25%
Tumor size > 2 cm	77%	38%	61%	88%	86%	93%	55%	61%	89%	62%	41%	46%	30%	13%	27%	63%	20%	50%
pCR	-	-	39%	-	-	73%	-	-	39%	-	-	19%	-	-	0%	-	-	0%



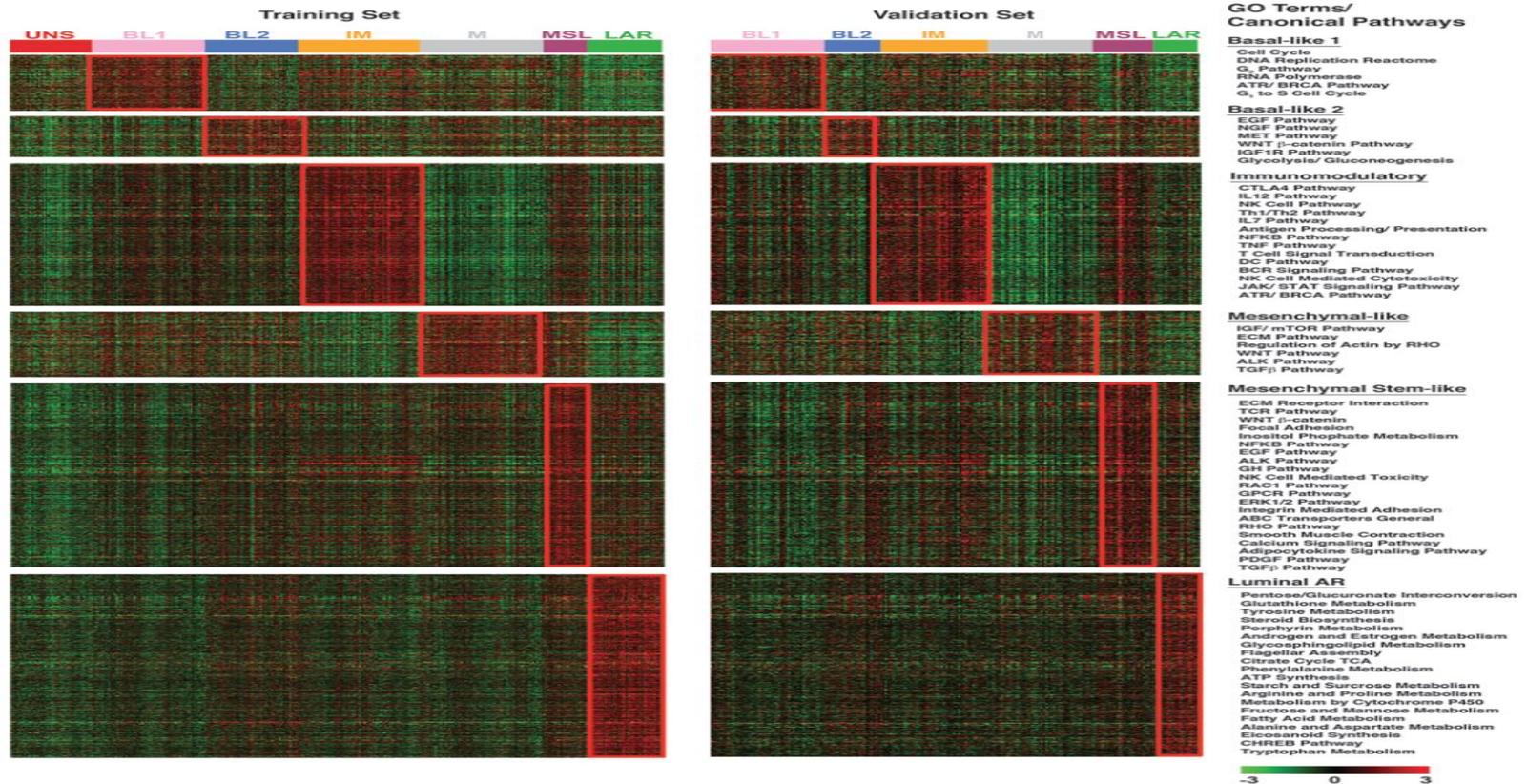
Tous les cancers triples négatifs  
ne correspondent pas  
aux sous-type “basal-like” et “claudin-low”



# Identification of human triple-negative breast cancer subtypes and preclinical models for selection of targeted therapies

Brian D. Lehmann,<sup>1</sup> Joshua A. Bauer,<sup>1</sup> Xi Chen,<sup>2</sup> Melinda E. Sanders,<sup>3</sup>  
A. Bapsi Chakravarthy,<sup>4</sup> Yu Shyr,<sup>2</sup> and Jennifer A. Pietenpol<sup>1</sup>

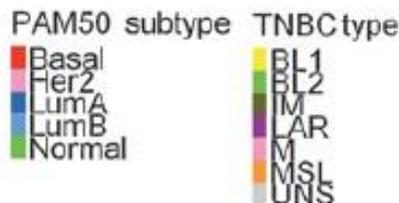
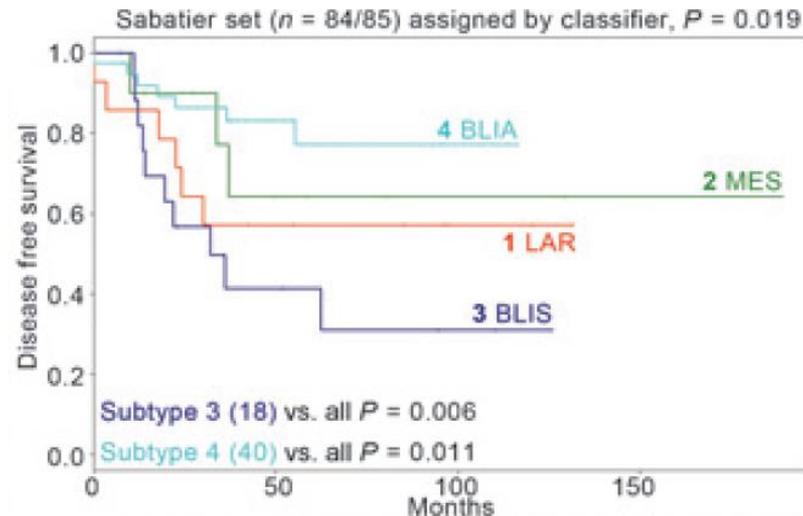
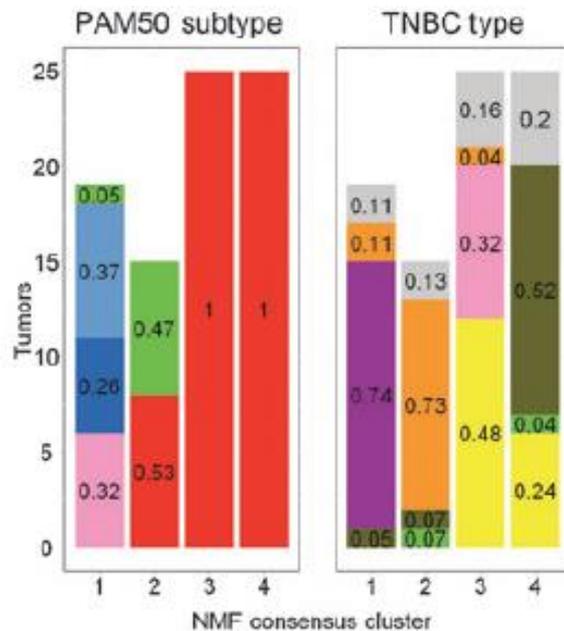
*J Clin Invest* doi:10.1172/JCI45014.



# Comprehensive Genomic Analysis Identifies Novel Subtypes and Targets of Triple-Negative Breast Cancer

Matthew D. Burstein<sup>1</sup>, Anna Tsimelzon<sup>2</sup>, Graham M. Poage<sup>3</sup>, Kyle R. Covington<sup>2</sup>, Alejandro Contreras<sup>2,4</sup>, Suzanne A.W. Fuqua<sup>2</sup>, Michelle I Savage<sup>3</sup>, C. Kent Osborne<sup>2</sup>, Susan G. Hilsenbeck<sup>2</sup>, Jenny C. Chang<sup>5</sup>, Gordon B. Mills<sup>6</sup>, Ching C. Lau<sup>7</sup>, and Powel H. Brown<sup>3</sup>

Clin Cancer Res; 21(7) April 1, 2015



**Subtype 1**  
Luminal AR  
(LAR)

**Subtype 2**  
Mesenchymal  
(MES)

**Subtype 3**  
Basal-like  
immune  
suppressed  
(BLIS)

**Subtype 4**  
Basal-like  
immune  
activated  
(BLIA)

# Retours aux fondamentaux

## Basal-like & Triple Negative Breast Cancers

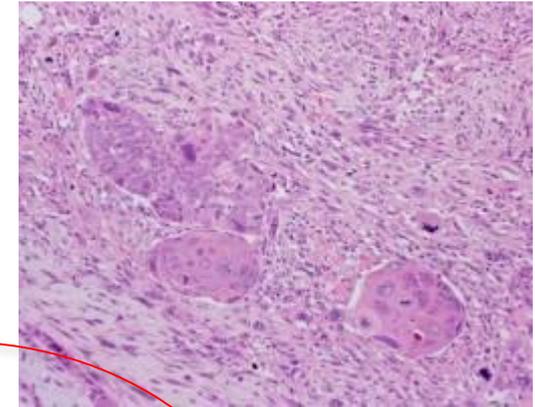
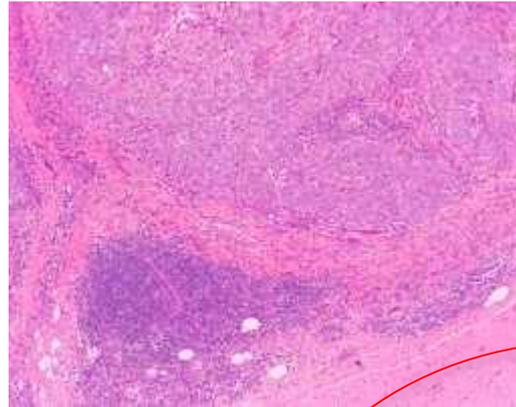
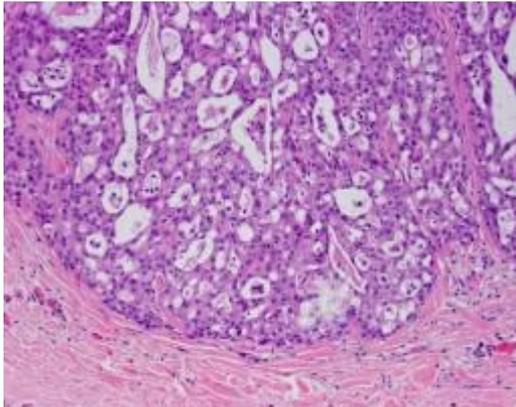
Low grade tumours

High grade tumours

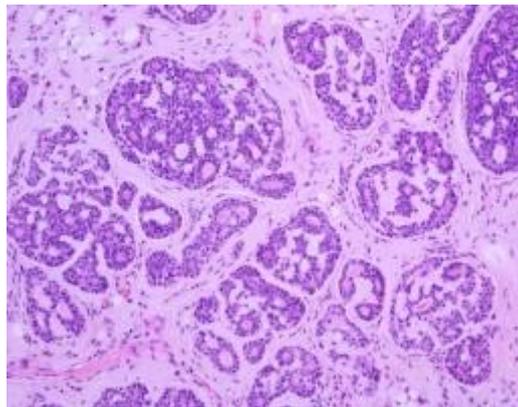
Secretory carcinoma

Medullary breast cancer

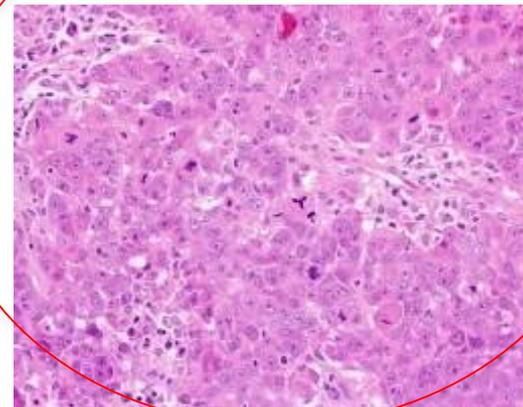
Metaplastic breast cancer



Adenoid cystic carcinoma



Grade 3 – IDC-NST



# Conclusion 2

- La définition des cancers du sein « triple négatif » est anatomopathologique mais la caractérisation moléculaire des cancers du sein a amené à définir différentes entités
- 4 sous-types moléculaires composent les cancers du sein triple négatifs: luminal AR; mésenchymateux, basal-like avec immunité activée et basal-like avec immunité supprimée. Le pronostic de ces sous)types est différent mais ne permet pas de porter une décision d'abstention de chimiothérapie
- Finalement, le type histologique permet de définir des cancers du sein à pronostics différents possiblement non candidats à une chimiothérapie en situation adjuvante

Critères de décision  
de « désescalade » thérapeutique

# 70-Gene Signature as an Aid to Treatment Decisions in Early-Stage Breast Cancer

F. Cardoso, L.J. van't Veer, J. Bogaerts, L. Slaets, G. Viale, S. Delaloge, J.-Y. Pierga, E. Brain, S. Causeret, M. DeLorenzi, A.M. Glas, V. Golfopoulos, T. Goulioti, S. Knox, E. Matos, B. Meulemans, P.A. Neijenhuis, U. Nitz, R. Passalacqua, P. Ravdin, I.T. Rubio, M. Saghatchian, T.J. Smilde, C. Sotiriou, L. Stork, C. Straehle, G. Thomas, A.M. Thompson, J.M. van der Hoeven, P. Vuylsteke, R. Bernards, K. Tryfonidis, E. Rutgers, and M. Piccart,  
for the MINDACT Investigators\*

**N Engl J Med 2016;375:717-29.**

# 70-Gene Signature as an Aid to Treatment Decisions in Early-Stage Breast Cancer

F. Cardoso, L.J. van't Veer, J. Bogaerts, L. Slaets, G. Viale, S. Delaloge, J.-Y. Pierga, E. Brain, S. Causeret, M. DeLorenzi, A.M. Glas, V. Golfopoulos, T. Goulioti, S. Knox, E. Matos, B. Meulemans, P.A. Neijenhuis, U. Nitz, R. Passalacqua, P. Ravdin, I.T. Rubio, M. Saghatchian, T.J. Smilde, C. Sotiriou, L. Stork, C. Straehle, G. Thomas, A.M. Thompson, J.M. van der Hoeven, P. Vuylsteke, R. Bernards, K. Tryfonidis, E. Rutgers, and M. Piccart, for the MINDACT Investigators\* **N Engl J Med 2016;375:717-29.**

**Table 1. Characteristics of the Patients and Tumors at Baseline, According to Risk Group.\***

Characteristic	Low Clinical Risk		High Clinical Risk		All Patients (N = 6693)
	Low Genomic Risk (N = 2745)	High Genomic Risk (N = 592)	Low Genomic Risk (N = 1550)	High Genomic Risk (N = 1806)	
	<i>number (percent)</i>				
Clinical–pathological subtype**					
Luminal HER2-negative: ER-positive, PR-positive, or both	2638 (96.1)	467 (78.9)	1402 (90.5)	895 (49.6)	5402 (80.7)
Luminal HER2-positive: ER-positive, PR-positive, or both	96 (3.5)	68 (11.5)	115 (7.4)	222 (12.3)	501 (7.5)
Nonluminal HER2-positive: ER-negative, PR-negative	1 (<0.1)	5 (0.8)	9 (0.6)	122 (6.8)	137 (2.0)
Triple negative: ER-negative, PR-negative, HER2-negative	3 (0.1)	51 (8.6)	20 (1.3)	566 (31.3)	640 (9.6)
Missing data	7 (0.3)	1 (0.2)	4 (0.3)	1 (0.1)	13 (0.2)

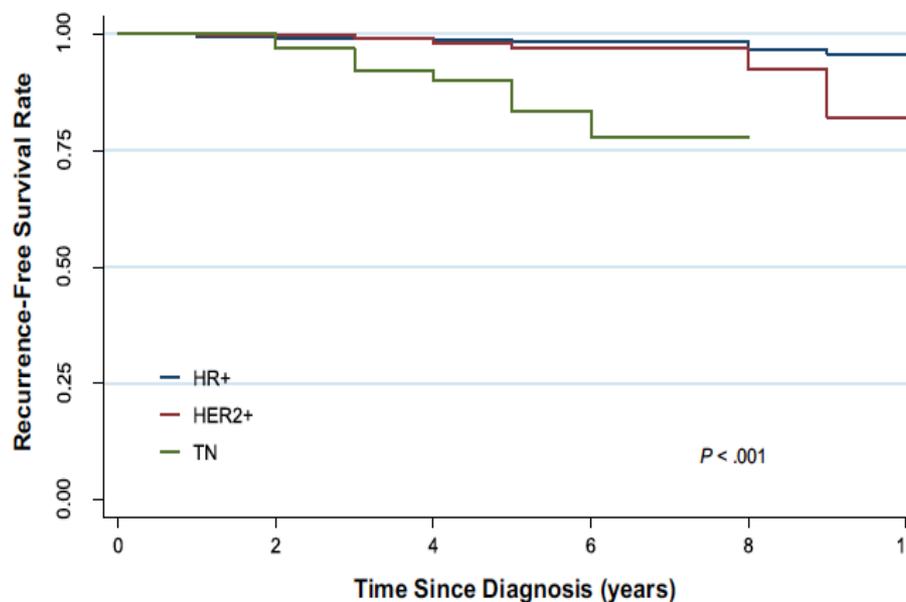
# Clinical Significance of HER2-Positive and Triple-Negative Status in Small ( $\leq 1$ cm) Node-Negative Breast Cancer

Elan Gorshein, Paula Klein, Susan K. Boolbol, Theresa Shao

Clinical Breast Cancer October 2014

Characteristic	HR <sup>+</sup> (n = 494)	HER2 <sup>+</sup> (n = 107)	TN (n = 55)	P
<b>Age, Years</b>				.162
<50	113	25	9	
50-64	220	59	26	
≥65	161	23	20	
<b>Race</b>				.014
White	354	80	31	
Black	41	8	13	
Hispanic	35	9	4	
Asian	24	8	3	
Other/Unknown	40	2	4	
<b>Grade</b>				<.001
1	202	31	1	
2	182	39	17	
3	42	27	37	
Unknown	68	10	0	
<b>ER/PR</b>				—
Positive	—	78	—	—
Negative	—	29	—	—
<b>LVI</b>				.02
Positive	15	8	7	
Negative	479	99	48	
<b>IDC/LC</b>				.380
IDC	461	103	53	
ILC	33	4	2	
<b>Tumor Size</b>				.203
T1a	172	44	15	
T1b	322	63	40	
<b>Chemotherapy</b>				<.001
Yes	47	32	23	
No	436	73	30	
Unknown	11	2	2	
<b>Radiation</b>				.328
Yes	339	72	42	
No	140	31	12	
Unknown	15	4	0	

Figure 1 Recurrence-Free Survival in T1abN0 Breast Cancer Patients According to HR and HER2 Status



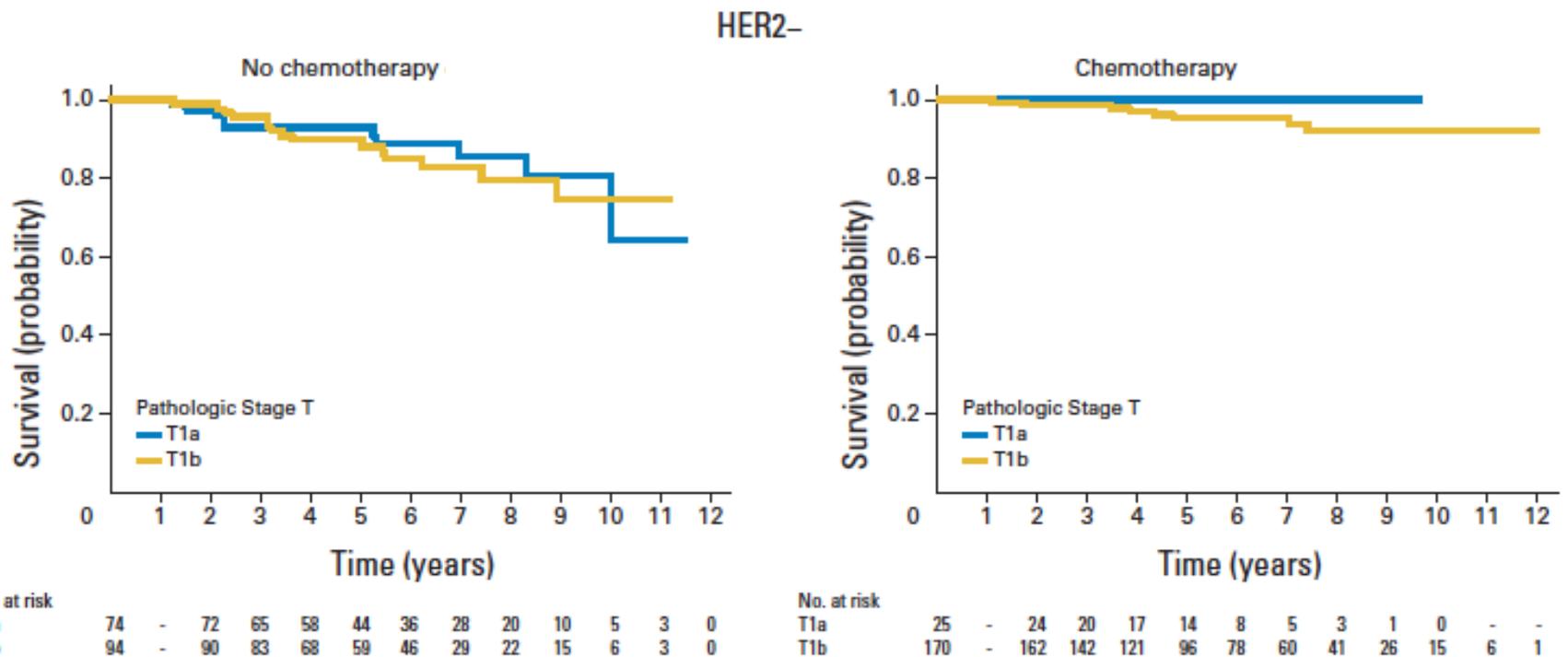
# Outcomes by Tumor Subtype and Treatment Pattern in Women With Small, Node-Negative Breast Cancer: A Multi-Institutional Study

*Ines Vaz-Luis, Rebecca A. Ottesen, Melissa E. Hughes, Rizvan Mamet, Harold J. Burstein, Stephen B. Edge, Ana M. Gonzalez-Angulo, Beverly Moy, Hope S. Rugo, Richard L. Theriault, Jane C. Weeks, Eric P. Winer, and Nancy U. Lin*

VOLUME 32 · NUMBER 20 · JULY 10, 2014

JOURNAL OF CLINICAL ONCOLOGY

C



# Prognostic and predictive value of tumor-infiltrating lymphocytes in two phase III randomized adjuvant breast cancer trials

M. V. Dieci<sup>1</sup>, M. C. Mathieu<sup>2</sup>, V. Guarneri<sup>1,3</sup>, P. Conte<sup>1,3</sup>, S. Delaloge<sup>4,5</sup>, F. Andre<sup>4,5,6</sup> & A. Goubar<sup>4\*</sup>

<sup>1</sup>Department of Surgery, Oncology and Gastroenterology, University of Padova, Padova, Italy; <sup>2</sup>Department of Medical Biology and Pathology, Gustave Roussy, Villejuif, France;

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**Table 3.** Association of TIL with prognosis (overall survival) in different breast cancer subgroups

Subgroup	Patients (N)	Events (N)	TIL variable (10% increase)	Univariate			Multivariate		
				HR	95% CI	P	HR	95% CI	P
ER+/HER2-	463	112	It-TIL	0.95	0.82-1.12	0.6			
			Str-TIL	1.01	0.89-1.15	0.8			
HER2+	112	42	It-TIL	0.89	0.75-1.05	0.2	0.84	0.70-1.01	0.055
			Str-TIL	0.88	0.76-1.01	0.07	0.82	0.69-0.96	0.02
ER-/HER2-	199	61	It-TIL	0.83	0.69-0.99	0.04	0.82	0.68-0.99	0.04
			Str-TIL	0.89	0.78-1.02	0.1	0.85	0.74-0.99	0.04

Multivariate adjusted on grade, LN and treatment arm for ER-/HER2-, and on pT, LN and treatment arm for HER2+.

N, Number; ER, estrogen receptor; HER2, human epidermal growth factor receptor 2; HR, hazard ratio; CI, confidence interval.

# Prognostic and predictive value of tumor-infiltrating lymphocytes in two phase III randomized adjuvant breast cancer trials

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**Table 4.** Predictive value of TIL: TIL × anthracycline treatment interaction *P* tests

	<i>N</i>	OS interaction <i>P</i>
<b>Binary TIL variable (high-TIL/low-TIL)</b>		
<b>All patients</b>	781	0.43
ER+/HER2–	463	0.3
ER–/HER2–	199	0.66
HER2+	112	0.76
<b>It-TIL (per 10% increase)</b>		
<b>All patients</b>	781	0.17
ER+/HER2–	463	0.18
ER–/HER2–	199	0.55
HER2+	112	0.84
<b>Str-TIL (per 10% increase)</b>		
<b>All patients</b>	781	0.6
ER+/HER2–	463	0.32
ER–/HER2–	199	0.44
HER2+	112	0.81

*N*, number; OS, overall survival; ER, estrogen receptor; HER2, human epidermal growth factor receptor 2.

# Features of triple-negative breast cancer

## Analysis of 38,813 cases from the national cancer database

Magdalena L. Plasilova, MD, PhD, Brandon Hayse, BSc, Brigid K. Killelea, MD, MPH, Nina R. Horowitz, MD, Anees B. Chagpar, MD, MSc, MPH, MA, MBA, Donald R. Lannin, MD\*

*Medicine (2016) 95:35(e4614)*

**Incidence of tripl-negative tumors by histologic type .**

	Total cancer number	Nontriple-negative number (%)			Triple-negative number (%)	P <sup>#</sup>
		HR+ Her2–	HR+ Her2+	HR– Her2+		
Infiltrating ductal	224,844	155,060 (69.0%)	25,170 (11.2%)	11,788 (5.2%)	32,826 (14.6%)	Ref
Adenoid cystic	220	45 (20.5%)	1 (0.5%)	2 (0.9%)	172 (78.2%)	<0.001
Metaplastic	1,221	227 (18.6%)	18 (1.5%)	45 (3.7%)	931 (76.2%)	<0.001
Medullary	643	178 (27.7%)	33 (5.1%)	43 (6.7%)	389 (60.5%)	<0.001
Apocrine adenocarcinoma	480	97 (20.2%)	41 (8.5%)	70 (14.6%)	272 (56.7%)	<0.001
Carcinoma NOS	2,186	1179 (53.9%)	252 (11.5%)	154 (7.0%)	601 (27.5%)	<0.001
Inflammatory	934	357 (38.2%)	144 (15.4%)	191 (20.4%)	242 (25.9%)	<0.001
Adenocarcinoma NOS	1,598	926 (57.9%)	200 (12.5%)	154 (9.6%)	318 (19.9%)	<0.001
Neoplasm, malignant	615	440 (71.5%)	56 (9.1%)	23 (3.7%)	96 (15.6%)	0.479
Adenocarcinoma with mixed subtypes	259	195 (75.3%)	19 (7.3%)	5 (1.9%)	40 (15.4%)	0.701
Infiltrating ductular	490	339 (69.2%)	61 (12.4%)	23 (4.7%)	67 (13.7%)	0.562
Inf ductal mixed with other types	9,501	7502 (79.0%)	728 (7.7%)	273 (2.9%)	998 (10.5%)	<0.001
Intraductal papillary with invasion	546	445 (81.5%)	36 (6.6%)	11 (2.0%)	54 (9.9%)	0.002
Pagets with infiltrating ductal	345	116 (33.6%)	96 (27.8%)	108 (31.3%)	25 (7.2%)	<0.001
Papillary carcinoma	970	861 (88.8%)	43 (4.4%)	8 (0.8%)	58 (6.0%)	<0.001
Micropapillary	600	461 (76.8%)	74 (12.3%)	30 (5.0%)	35 (5.8%)	<0.001
Cribriform carcinoma	550	493 (89.6%)	27 (4.9%)	5 (0.9%)	25 (4.5%)	<0.001
Inf lobular mixed with other types	1,060	951 (89.7%)	52 (4.9%)	10 (0.9%)	47 (4.4%)	<0.001
Infiltrating ductal and inf lobular	15,040	13,239 (88.0%)	1197 (8.0%)	162 (1.1%)	442 (2.9%)	<0.001
Infiltrating lobular carcinoma	27,799	25,756 (92.7%)	1382 (5.0%)	121 (0.4%)	540 (1.9%)	<0.001
Mucinous carcinoma	5,608	5216 (93.0%)	314 (5.6%)	45 (0.8%)	33 (0.6%)	<0.001
Tubular carcinoma	1,756	1710 (97.4%)	39 (2.2%)	1 (0.1%)	6 (0.3%)	<0.001
Other/unknown	1,672	846 (50.6%)	126 (7.5%)	104 (6.2%)	596 (35.6%)	<0.001

\* Where  $N > 200$ .

# Triple negative vs nontriple negative compared to infiltrating ductal.

HR=hormone receptor, Her2=human epidermal growth factor receptor.

# Breast lesions of uncertain malignant nature and limited metastatic potential: proposals to improve their recognition and clinical management

Emad A Rakha, Sunil Badve,<sup>1</sup> Vincenzo Eusebi,<sup>2</sup> Jorge S Reis-Filho,<sup>3</sup> Stephen B Fox,<sup>4</sup> David J Dabbs,<sup>5</sup> Thomas Decker,<sup>6</sup> Zsolt Hodi, Shu Ichihara,<sup>7</sup> Andrew HS Lee, José Palacios,<sup>8</sup> Andrea L Richardson,<sup>9</sup> Anne Vincent-Salomon,<sup>10</sup> Fernando C Schmitt,<sup>11</sup> Puay-Hoon Tan,<sup>12</sup> Gary M Tse<sup>13</sup> & Ian O Ellis

*Histopathology* 2016, 68, 45–56.

- Cancers du sein invasifs à potentiel métastatique limité
  - Carcinome papillaire solide ou encapsulé
  - Carcinome adénosquameux de bas grade
  - Carcinome métaplasique de bas grade
  - Tumeurs phyllodes “borderline” & adenomyoepithéliomes atypiques

# Rare Breast Cancer: 933 Adenoid Cystic Carcinomas from the National Cancer Data Base

Nandini Kulkarni, MD<sup>1</sup>, Christopher M. Pezzi, MD<sup>1</sup>, Jon M. Greif, DO<sup>2,3</sup>, V. Suzanne Klimberg, MD<sup>4</sup>, Lisa Bailey, MD<sup>2,3</sup>, Soheila Korourian, MD<sup>4</sup>, and Marlene Zuraek, MD<sup>5</sup>

<sup>1</sup>Department of Surgery, Abington Memorial Hospital, Abington, PA; <sup>2</sup>Bay Area Breast Surgeons, Inc., Oakland, CA;

<sup>3</sup>Alta Bates Summit Medical Center, Oakland, CA; <sup>4</sup>University of Arkansas for Medical Sciences, Little Rock, AR;

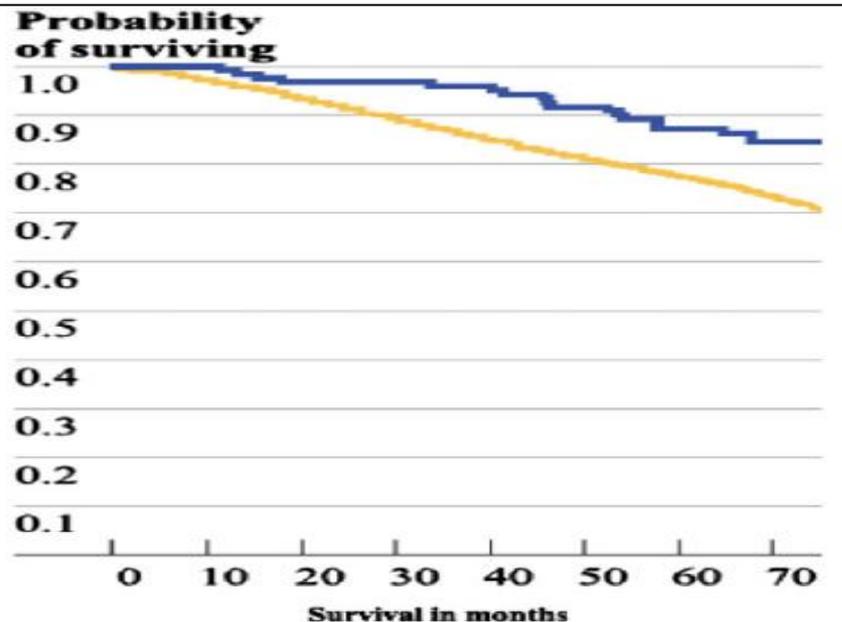
<sup>5</sup>Stanford University Medical Center, Palo Alto, CA

Ann Surg Oncol (2013) 20:2236–2241

**TABLE 1** Characteristics, treatment, and survival of patients by histologic type of breast cancer

Characteristic	IDC	ACC	<i>p</i>
<i>n</i>	729,938	933	
Age, median (years)	58	60	
Reported race/ethnicity	–	–	0.97
Median tumor size (mm)	16	18	<0.0001
Grade 1 disease, <i>n</i>	18	46	<0.0001
Axillary node evaluation (%)	96.3	75.9	<0.0001
Node positive (%)	35.5	5.1	<0.0001
ER-positive tumors (%)	75.6	15.4	<0.0001
PR-positive tumors (%)	65.2	13.3	<0.0001
Breast conservation (%)	59.8	69.8	<0.0001
Chemotherapy (%)	45.4	11.3	<0.0001
Hormone therapy (%)	39.8	8.9	<0.0001
5-year OS (%)	84	88	0.02
Grade 1 OS (%)	92	91	0.05
Stage 1 OS (%)	91	90	0.93

IDC infiltrating ductal carcinoma, ACC adenoid cystic carcinoma, ER estrogen receptor, PR progesterone receptor, OS overall survival



Histology, mastectomy subgroup only	<i>n</i>	Median OS (in months)	5-year OS	<i>P</i> -value by Logrank test
ACC	136	82.50	88%	<b>0.007</b>
IDC	155,318	123.79	78%	

**FIG. 2** Kaplan–Meier OS curve, mastectomy group only, ACC vs. IDC, 1998–2003

# Rare Breast Cancer: 246 Invasive Secretory Carcinomas From the National Cancer Data Base

JOHN DOROMAL JACOB, MD,<sup>1\*</sup> CAITLIN HODGE, MD, MPH,<sup>1</sup> JAN FRANKO, MD, PhD,<sup>2</sup>  
CHRISTOPHER M. PEZZI, MD,<sup>1</sup> CHARLES D. GOLDMAN, MD,<sup>2</sup> AND VICKI SUZANNE KLIMBERG, MD<sup>3</sup>

Journal of Surgical Oncology 2016;113:721-725

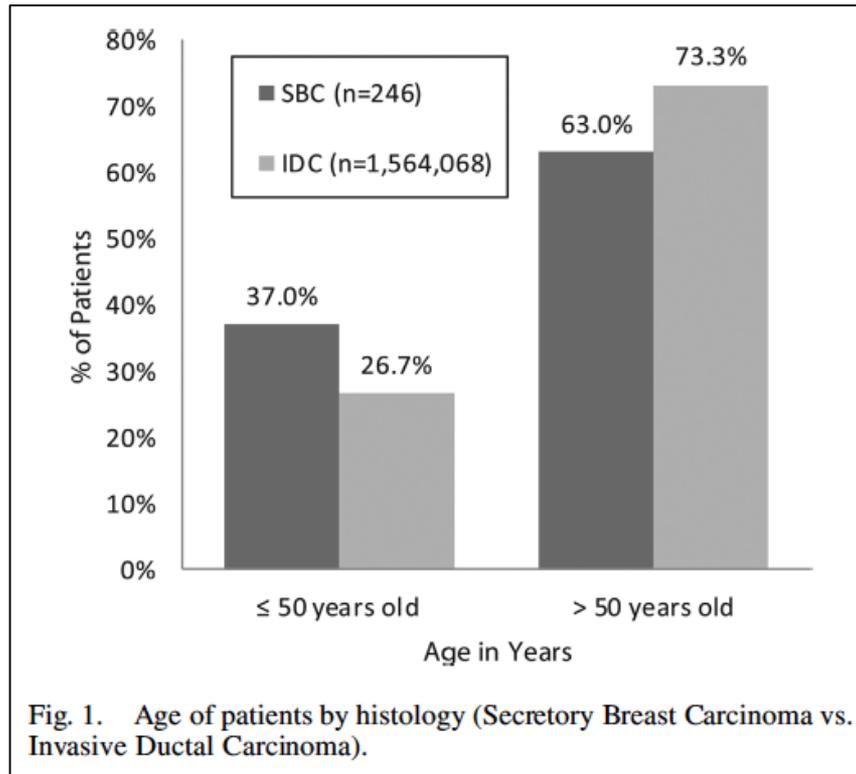
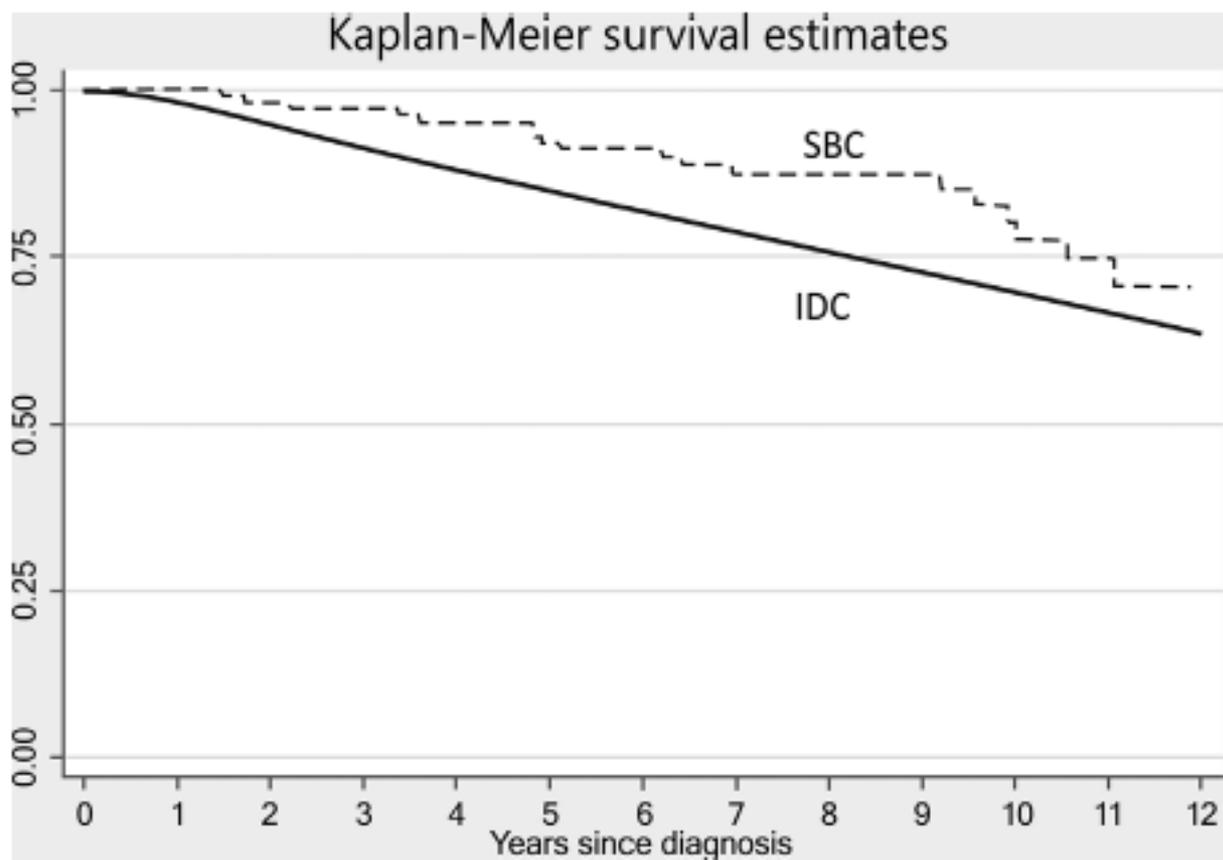


TABLE I. Characteristics, Treatment, and Survival of Patients by Histologic Type of Breast Cancer

Characteristic	Infiltrating ductal carcinoma	Secretory breast cancer	P-value
n=	1,564,068	246	
Age, mean (years)	60.4 ± 13.9	56.4 ± 16.0	<0.001
Proportion ≤50 year old	417548 (26.7%)	91 (37.0%)	
Proportion >50 year old	1146520 (73.3%)	155 (63.0%)	
Race			
Caucasian	1,324,935	196	
African-American	165,906	40	
Other	73,227	10	
Tumor size (mm), median	21.6 ± 25.5	19.9 ± 17.8	0.297
Grade 1 disease	281,170/1,564,068 (18%)	79/246 (32.1%)	<0.001
Node positive	464,864/1,360,549 (34.2%)	66/206 (32.0%)	0.520
ER-positive (%)	677,073/885,845 (76.4%)	88/137 (64.2%)	0.001
PR-positive (%)	578,612/878,944 (65.8%)	59/135 (43.7%)	<0.001
Her2neu, by IHC (%)	30,500/160,353 (19.0%)	1/21 (4.8%)	0.096
Breast conservation (%)	850,568/1,472,593 (57.8%)	145/240 (60.4%)	0.405
Chemotherapy (%)	682,844/1,513,070 (45.1%)	90/235 (38.3%)	0.035
Hormone therapy (%)	466,154/654,944 (71.2%)	59/87 (67.8%)	0.489



**Fig. 4. Kaplan–Meier survival estimates by histology for infiltrating ductal carcinoma and secretory carcinoma of the breast in the National Cancer Data Base, 1998–2005.**

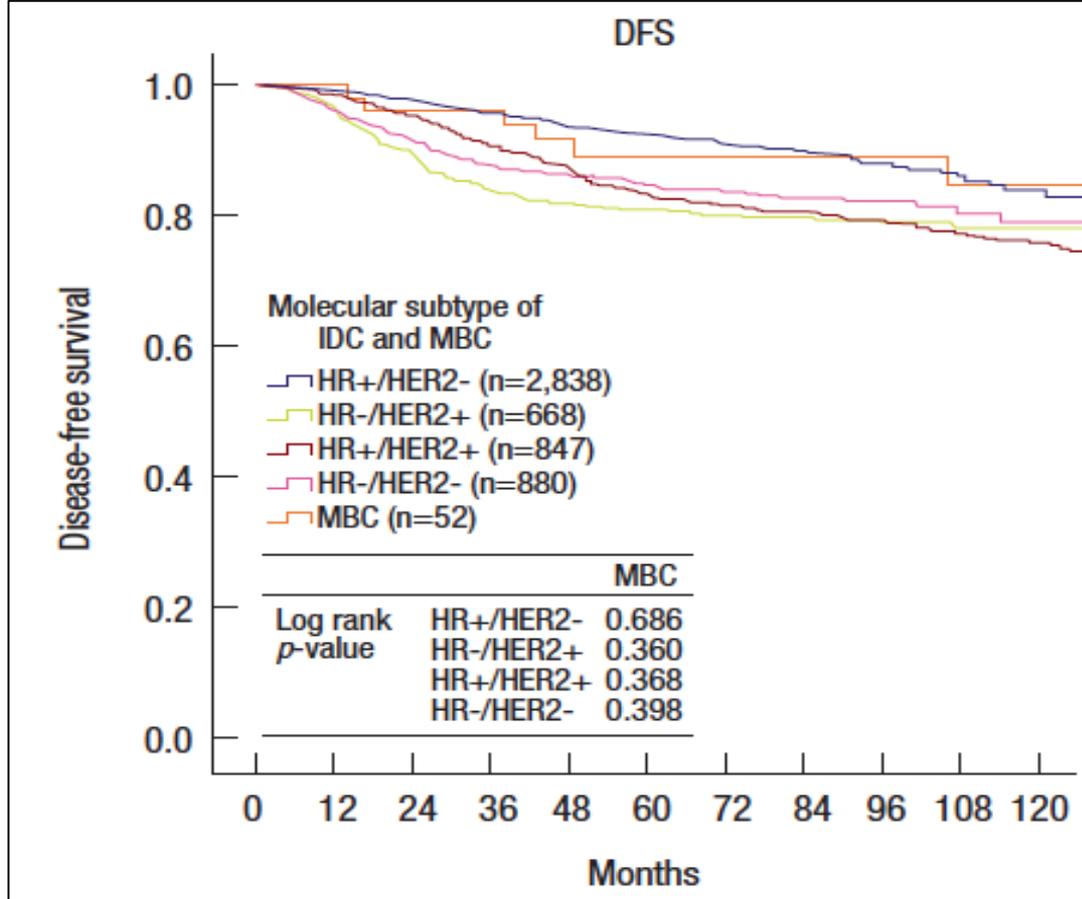
# Comparison of the Characteristics of Medullary Breast Carcinoma and Invasive Ductal Carcinoma

*J Breast Cancer 2013*

Inhye Park\*, Jiyoung Kim\*, Minkuk Kim, Soo Youn Bae, Se Kyung Lee, Won Ho Kil, Jeong Eon Lee, Seok Jin Nam

Division of Breast and Endocrine Surgery, Department of Surgery, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

Characteristic	MBC (n=52) No. of cases (%)	IDC (n=5,716) No. of cases (%)	p-value
N stage			<0.001
N0	45 (86.5)	3,341 (58.4)	
N1	7 (13.5)	1,560 (27.3)	
N2	0	512 (9.0)	
N3	0	302 (5.3)	
Stage			0.027
I	26 (50.0)	2,240 (39.2)	
IIa	19 (36.5)	1,815 (31.8)	
IIb	7 (13.5)	774 (13.5)	
III	0	887 (15.6)	
ER			<0.001
(+)	7 (15.2)	3,896 (69.0)	
(-)	39 (84.8)	1,754 (31.0)	
PR			<0.001
(+)	4 (8.7)	3,457 (61.2)	
(-)	42 (91.3)	2,188 (38.8)	
HER2			0.293
(+)	15 (37.5)	1,516 (28.9)	
(-)	25 (62.5)	3,721 (71.1)	
Molecular subtype			<0.001
HR+/HER2-	4 (10.0)	2,839 (54.2)	
HR+/HER2+	2 (5.0)	848 (16.2)	
HR-/HER2+	13 (32.5)	668 (12.8)	
HR-/HER2-	21 (52.5)	882 (16.8)	
Radiotherapy			1.000
Yes	34 (86.0)	3,807 (68.6)	
No	16 (32.0)	1,740 (31.4)	
Chemotherapy			0.469
Yes	43 (86.0)	4,519 (81.0)	
No	7 (14.0)	1,063 (19.0)	

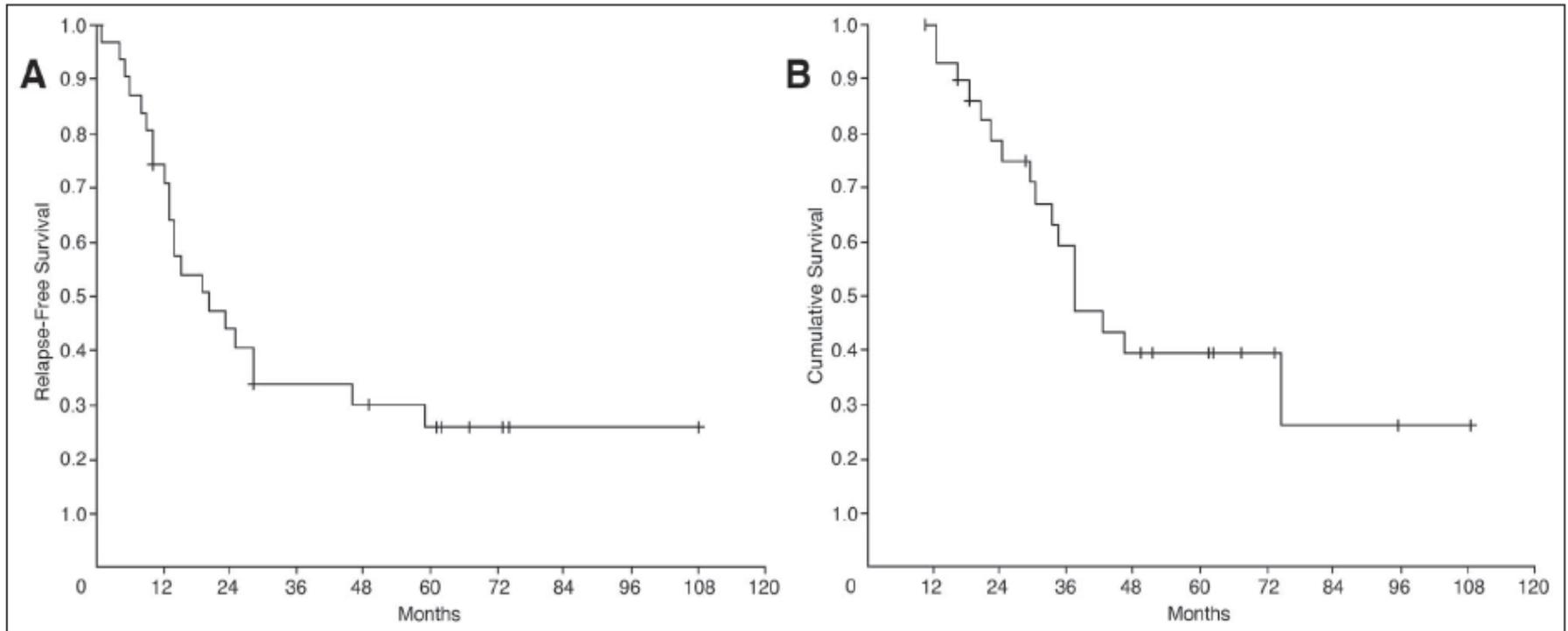


# Squamous Cell Carcinoma of the Breast

*Bryan T. Hennessy, Savitri Krishnamurthy, Sharon Giordano, Thomas A. Buchholz, Shu W. Kau, Zhigang Duan, Vicente Valero, and Gabriel N. Hortobagyi*

VOLUME 23 · NUMBER 31 · NOVEMBER 1 2005

JOURNAL OF CLINICAL ONCOLOGY



**Fig 2.** (A) Relapse-free survival of 31 patients with squamous cell carcinoma (SCC) of the breast with no metastatic disease at diagnosis. (B) Overall survival of 31 patients with SCC of the breast with no metastatic disease at diagnosis.

# Conclusion 3

- Les critères principaux permettant de sélectionner une population de patientes ayant un cancer du sein triple négatif et non candidates à une chimiothérapie adjuvante reposent sur le type histologique
- Même si la taille et l'infiltrat lymphocytaires sont corrélés au pronostic spontané de ces tumeurs, les données cliniques disponibles sont insuffisantes pour pouvoir décider d'une absence de chimiothérapie sur ces paramètres
- Les signatures moléculaires n'ont à ce jour pas leur place pour évaluer le pronostic de cette population

Recommendations

Nice | St Paul de Vence 2015



Cancers du sein  
Cancers de l'ovaire  
Soins de support

# **Prise en charge globale des cancers du sein triple-négatifs**

**Groupe de travail constitué de :**

**Anthony Goncalves, Eric-Charles Antoine, Florence Dalenc,  
Jean-Yves Pierga, Nina Rodosevic-Robin**



# Prise en charge des cancers du sein triple-négatifs

- 1. Les cancers du sein triple-négatifs sont définis par les seules caractéristiques suivantes RE=0 RP=0 HER2-négatif (0, 1 ou 2+ et HIS négatif) (accord d'experts)**

OK

- 1. Oui, je suis d'accord avec la proposition**
- 2. Non, je ne suis pas d'accord avec la proposition**
- 3. Je m'abstiens**

Jury	Salle
94%	54%
6%	35%
0%	12%



# Prise en charge des cancers du sein triple-négatifs

**2. Parmi les cancers du sein triple-négatifs, on distingue des sous-types histologiques morphologique (carcinome adenoïde kystique, sécrétoire, adeno-squameux de bas grade) qui ne relèvent pas de principe d'une chimiothérapie adjuvante (accord d'experts)**

OK

1. Oui, je suis d'accord avec la proposition
2. Non, je ne suis pas d'accord avec la proposition
3. Je m'abstiens

Jury	Salle
100%	97%
0%	3%
0%	0%



# Prise en charge des cancers du sein triple-négatifs

Cancers du sein  
Cancers de l'ovaire  
Soins de support

## 3. L'évaluation de l'infiltration lymphocytaire tumorale, à ce jour, n'impacte pas la prise en charge thérapeutique systémique (accord d'experts)



1. Oui, je suis d'accord avec la proposition
2. Non, je ne suis pas d'accord avec la proposition
3. Je m'abstiens

Jury	Salle
93%	96%
0%	0%
7%	4%



# Prise en charge des cancers du sein triple-négatifs

## 6. Une chimiothérapie adjuvante doit être discutée pour un cancer du sein triple négatif dans les pT1b pN0 (accord d'experts)

A REVOIR ?

1. Oui, je suis d'accord avec la proposition
2. Non, je ne suis pas d'accord avec la proposition
3. Je m'abstiens

Jury	Salle
94%	89%
6%	0%
0%	11%

Nice | St Paul de Vence



**Cancers du sein**  
**Cancers de l'ovaire**  
24 au 27 janvier 2017

**MERCI**