

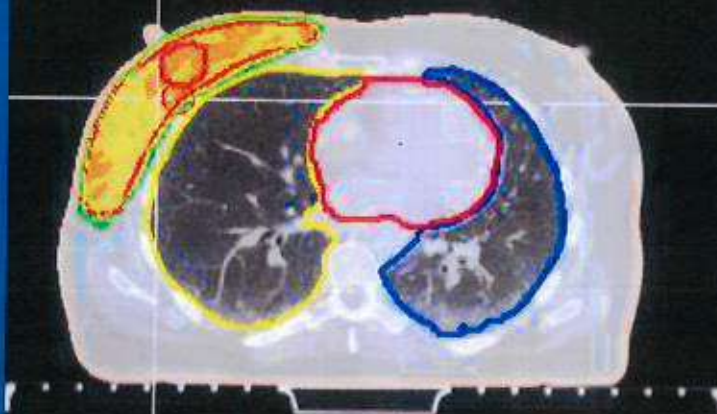
Estado Actual y Avances en Radioterapia de Mama

Octubre, 24

udp

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Directora Programa Radioterapia Oncológica, UDP



Agenda

01

¿Por qué
tratamos?

02

Avances
última década
y Manejo
Actual

03

Caso Clínico

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¿Por qué tratamos?

Varios objetivos
dependiendo de la
etapa tumoral.

1° Control Local

3° Sobrevida Cáncer Específica

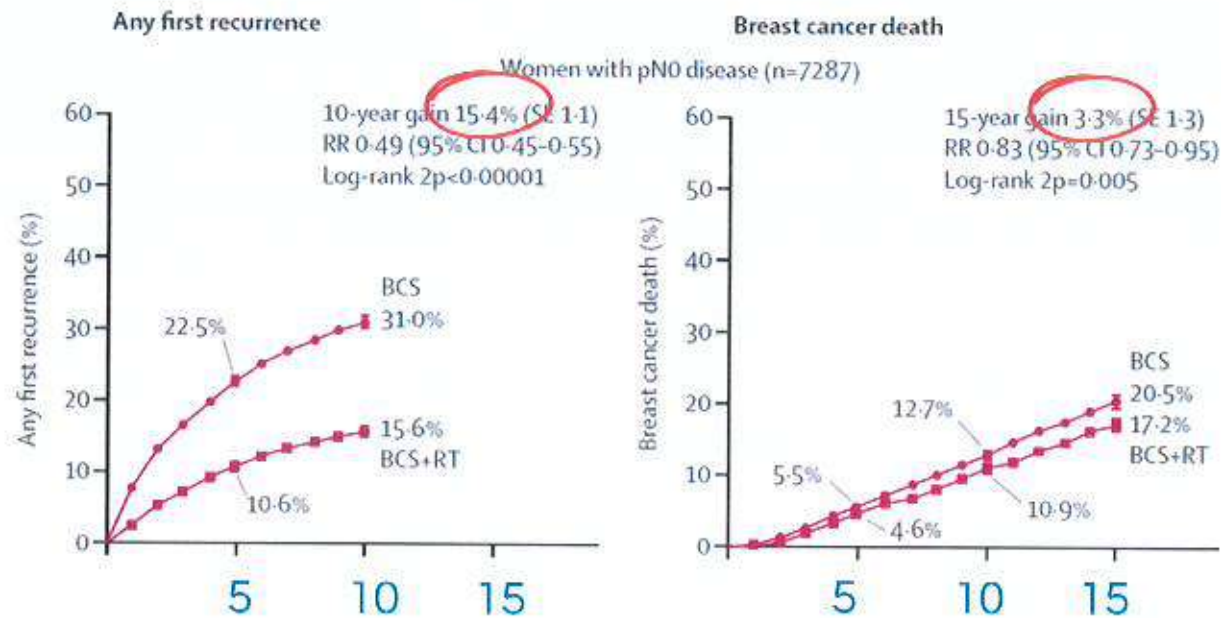
2° Sobrevida libre de enfermedad

4° Sobrevida global



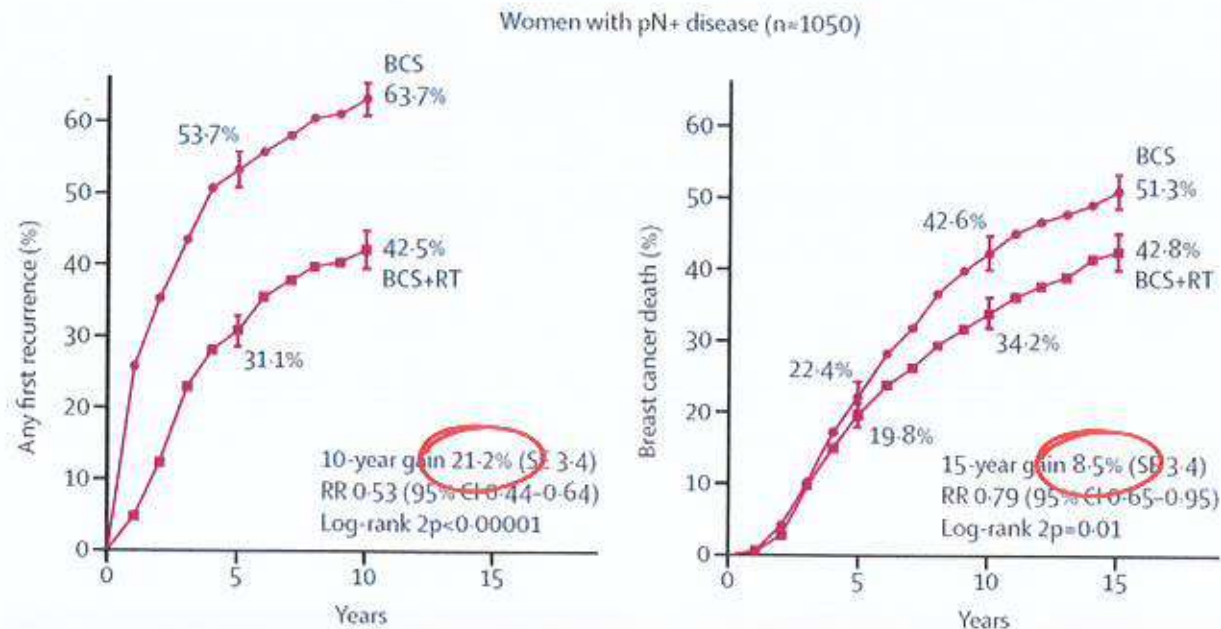
Cáncer In Situ e Infiltrantes Etapa Temprana

- Radioterapia adyuvante luego de cirugía conservadora disminuye riesgo de recidiva local
(Lancet 2011; 378: 1707–16)



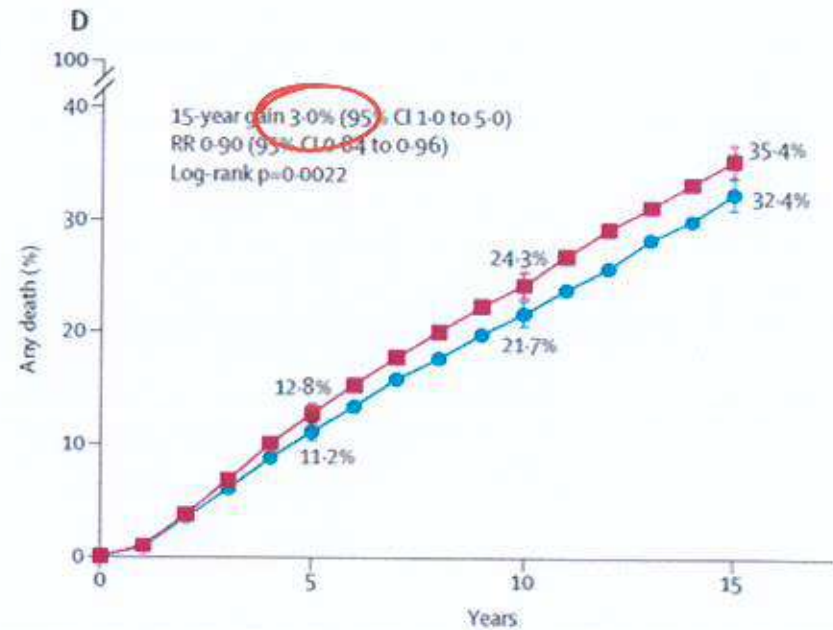
Cáncer Infiltrante de Mayor Riesgo

- Radioterapia adyuvante luego de cirugía conservadora disminuye riesgo de recidiva local, mortalidad por cáncer y general
(Lancet 2011; 378: 1707–16)



Irradiación Regional

- Estudios post 1989 disminuye recurrencias, mortalidad por cáncer y la mortalidad por cualquier causa
(Lancet 2023; 402: 1991–2003)



Any death rates (% per year [deaths per woman-years]) and log-rank analyse

Irradiación Regional

“

N+ o incluso en algunos casos de N- de alto riesgo (tumor centrales y/o mediales)

(NEJM 2015; 373: 307–16)

	Regional radiotherapy	No regional radiotherapy	Gain from regional radiotherapy
Any recurrence			
pN0	19.0%	21.3%	2.3%
pN1-3	25.6%	28.5%	2.9%
pN4+	46.8%	51.1%	4.3%
Breast cancer mortality			
pN0	10.9%	12.5%	1.6%
pN1-3	20.3%	23.0%	2.7%
pN4+	40.5%	45.0%	4.5%

Data are 15-year cumulative risks. The overall rate ratios (RRs) for any recurrence (RR=0.88; figure 3) and breast cancer mortality (0.87; figure 3) were applied to annual rates of any recurrence and breast cancer mortality in the trials, averaged over treatment groups (there was no significant heterogeneity in the proportional reductions [RRs] for any recurrence and breast cancer mortality). pN0=pathologically node negative. pN1-3=one to three involved axillary lymph nodes. pN4+=four or more involved axillary lymph nodes.

Table 2: Absolute effect of regional node radiotherapy on 15-year risk of any recurrence and breast cancer mortality by nodal status in 10 833 women in the seven newer trials with data on recurrence

(Lancet 2023; 402: 1991–2003)

¿Avances Últimas Décadas?



Disminución de
toxicidad

Acortar tratamientos

Disminuir volúmenes de
irradiación

Omisión de RT



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**SIDE
EFFECTS**

Disminución de Toxicidad

Control Respiratorio

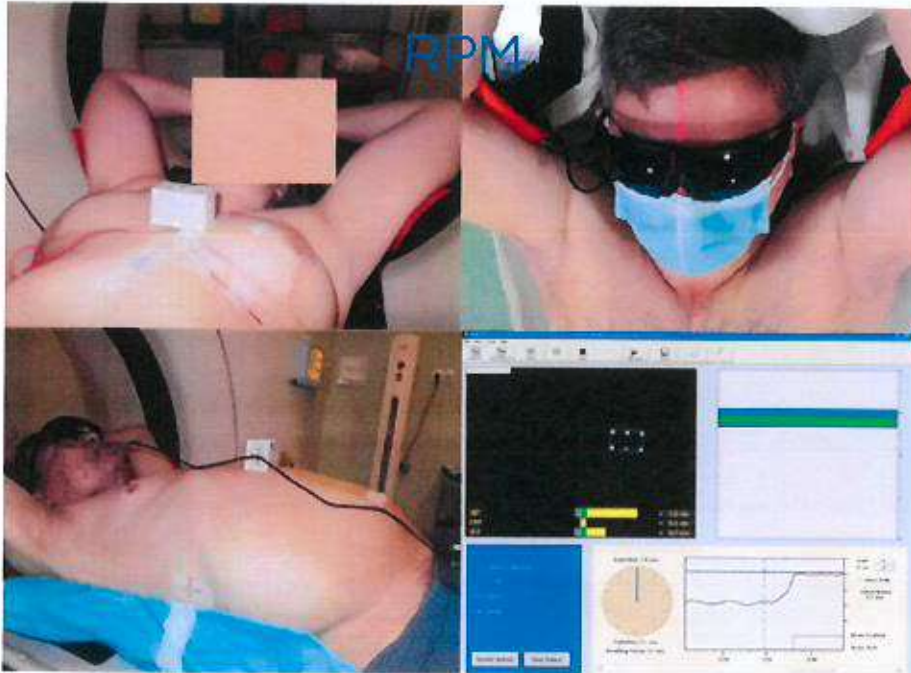
Control Respiratorio

Técnica existe hace 20 años con lenta implementación. Se basa en:

- Superficie (RPM)
- Espirometría (ABC)

Visualizar el objetivo: feedback por video.

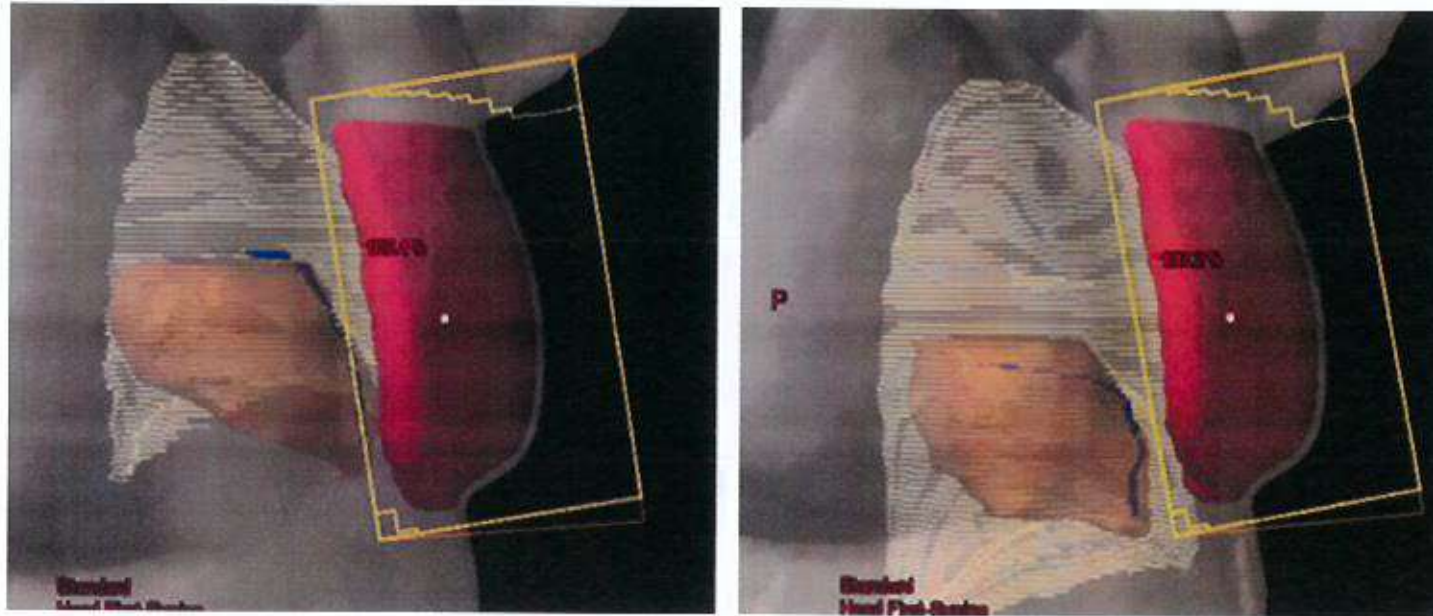
(Radiotherapy and Oncology 2023;185)



Control Respiratorio

Consiste: lograr inspiración profunda
cómoda y reproducible para CT y
tratamiento

Objetivo: disminuir dosis cardiaca y pulmón
(Radiotherapy and Oncology 2023;185)

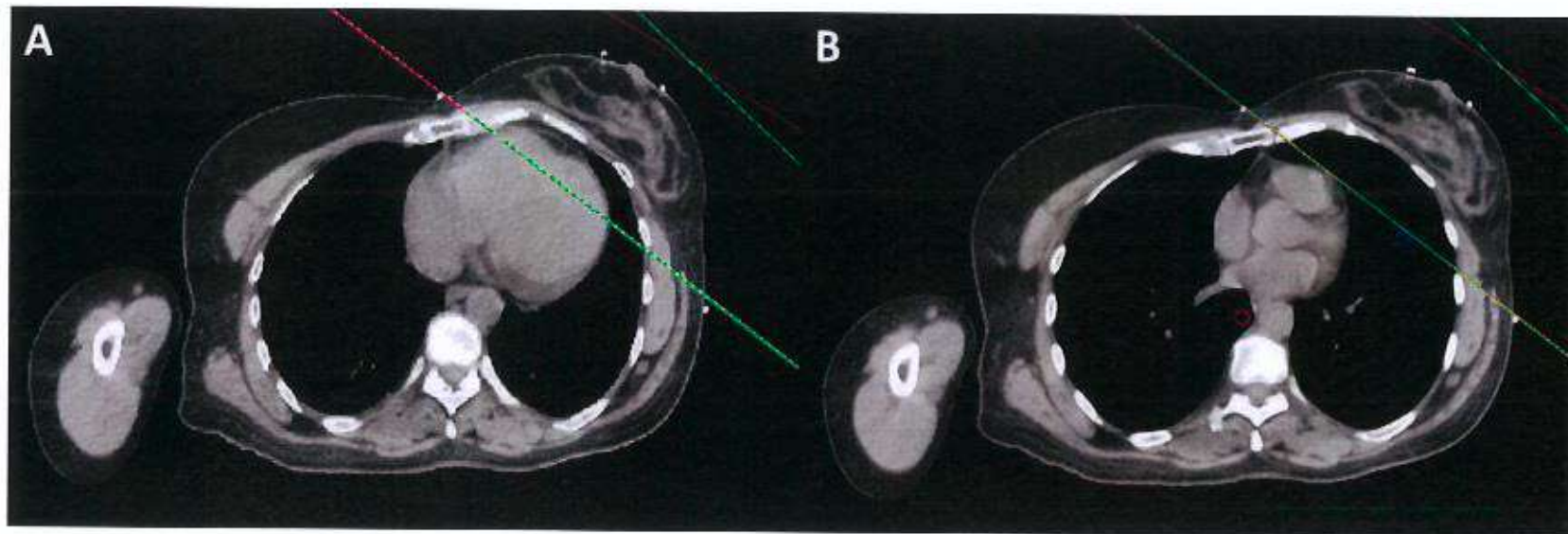


(Acta Oncol 2011; 50 (1): 42)

Control Respiratorio

Consiste: lograr inspiración profunda
cómoda y reproducible para CT y
tratamiento

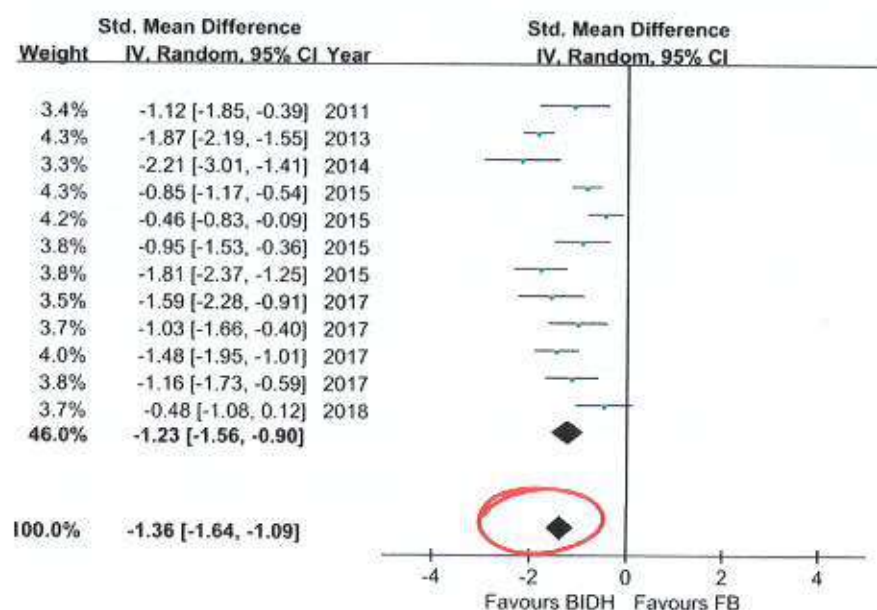
Objetivo: disminuir dosis cardiaca y pulmón
(Radiotherapy and Oncology 2023;185)



(Pract Radiat Oncol 2017; 7(2), 80)

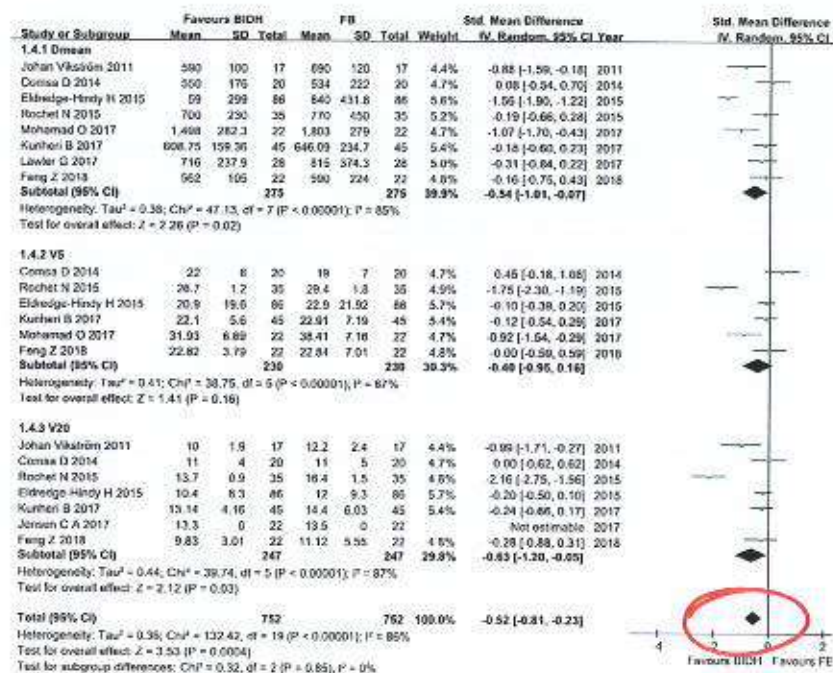
Control Respiratorio

Dosis Cardíaca: 50%

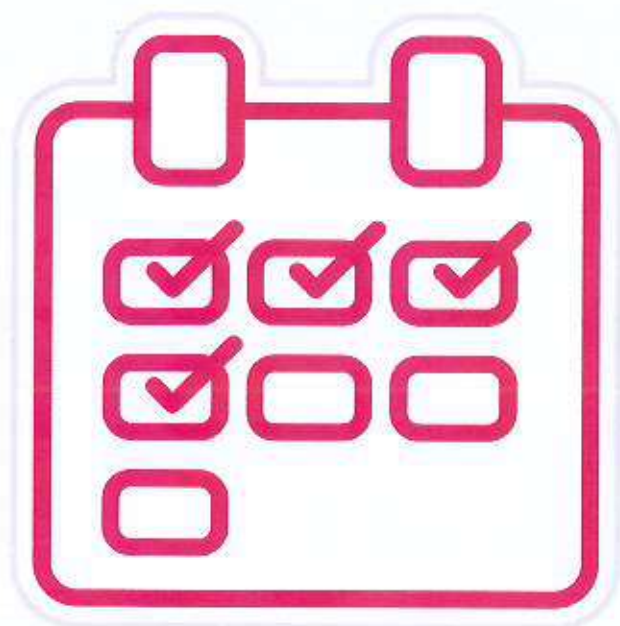


Meta-análisis Sociedad Japonesa
(Breast Cancer 2020; 27(2):299-307)

Dosis Pulmonar: 20%



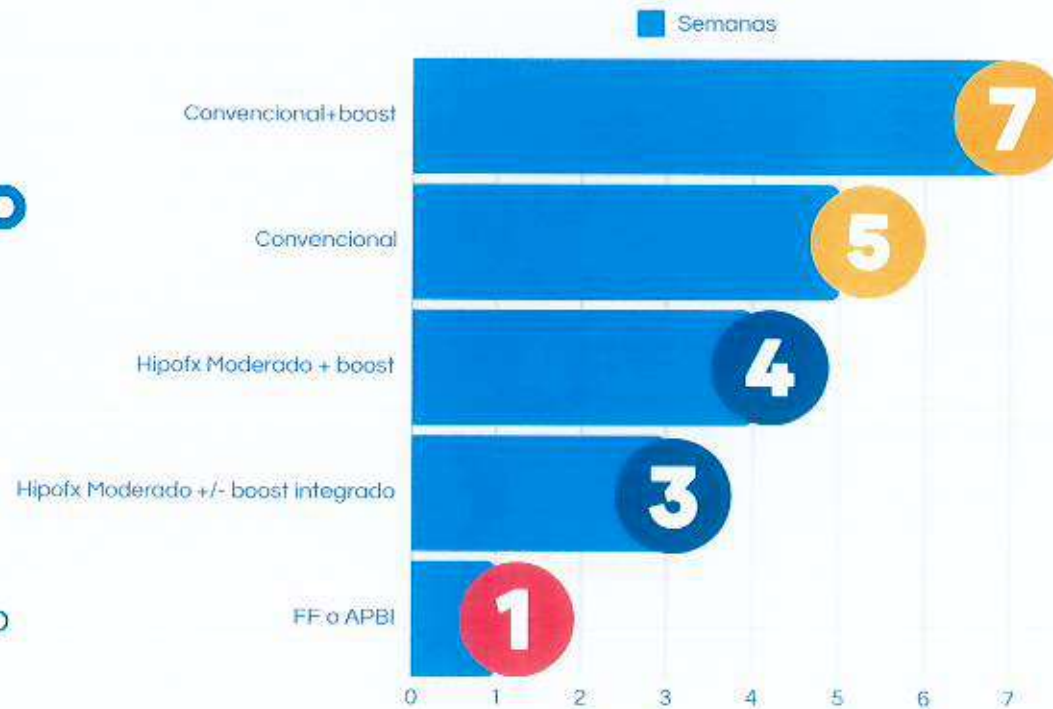
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Acortar Tratamientos

Acortar Tratamientos - Hipofraccionamiento

- Disminuir toxicidad
- Disminuir costos
 - Pacientes
 - Instituciones / país
- Aumentar "capacidad" para tratamiento



Acortar Tratamientos: Cronología



Hipofraccionamiento Moderado

Ontario

42.5 Gy en 16 fracciones



Start B

40 Gy en 15 fracciones



China

43.5 Gy en 15 fracciones



DBCG Hypo

40 Gy en 15 fracciones

Hipofx Moderado: START B

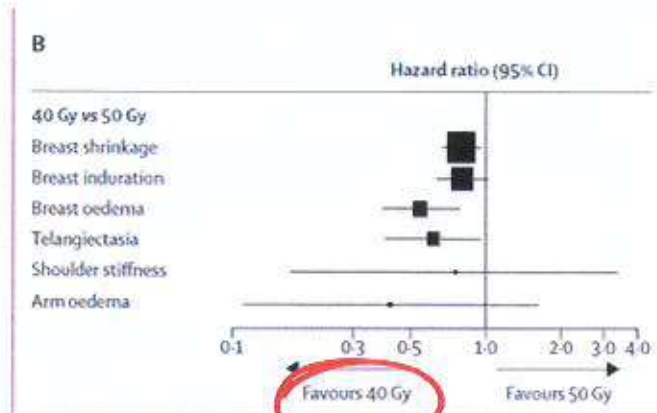


Figure 3: Late normal tissue effects in START-A (A) and START-B (B). Assessed as moderate or marked by physicians.

E. Randomizado mostró hipofx moderado en 15 fracciones fue no inferior en:

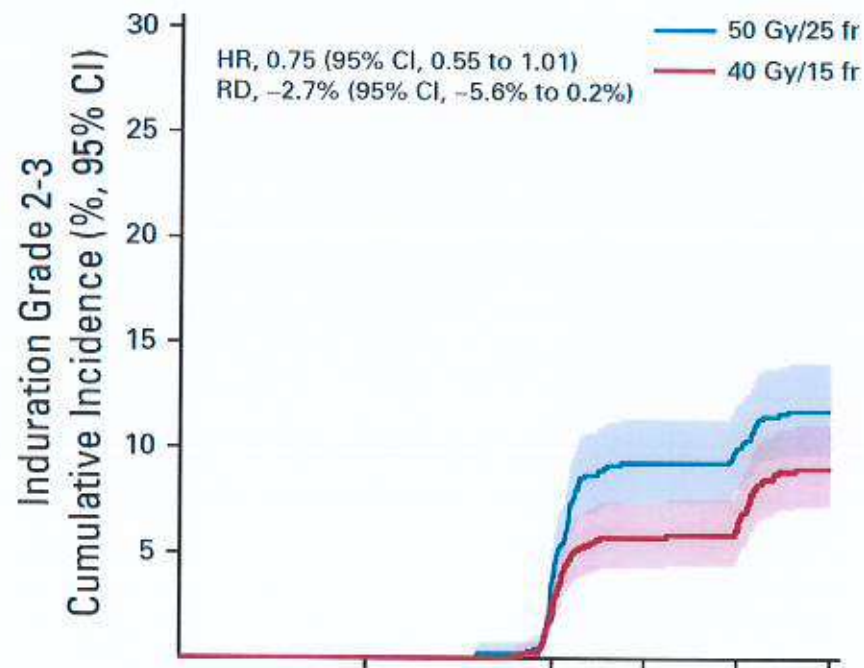
- toxicidad tardía (menos efectos)
- RL, RLR, MD, SVLE, SVG

	Events (n/patients; %)	Estimated proportion of patients with event by 5 years (%; 95% CI)	Estimated proportion of patients with event by 10 years (%; 95% CI)	Crude hazard ratio (95% CI)	p value*
Local relapse					
50 Gy	50/1105 (4.5%)	3.3% (2.4-4.6)	5.2% (3.9-6.9)	1.00	-
40 Gy	36/1110 (3.2%)	1.9% (1.2-3.0)	3.8% (2.7-5.2)	0.70 (0.46-1.07)	0.10
Local-regional relapse					
50 Gy	53/1105 (4.8%)	3.5% (2.5-4.8)	5.5% (4.2-7.2)	1.00	-
40 Gy	42/1110 (3.8%)	2.3% (1.5-3.4)	4.3% (3.2-5.9)	0.77 (0.51-1.16)	0.21
Distant relapse					
50 Gy	158/1105 (14.3%)	10.5% (8.8-12.5)	16.0% (13.8-18.5)	1.00	-
40 Gy	121/1110 (10.9%)	7.5% (6.0-9.2)	12.3% (10.3-14.6)	0.74 (0.59-0.94)	0.014
Any breast cancer-related event†					
50 Gy	222/1105 (20.1%)	14.3% (12.3-16.5)	22.2% (19.7-25.0)	1.00	-
40 Gy	182/1110 (16.4%)	10.4% (8.7-12.4)	18.3% (16.0-20.9)	0.79 (0.65-0.97)	0.022
All-cause mortality					
50 Gy	192/1105 (17.4%)	10.9% (9.1-12.9)	19.2% (16.8-21.9)	1.00	-
40 Gy	159/1110 (14.3%)	7.9% (6.4-9.6)	15.9% (13.7-18.4)	0.80 (0.65-0.99)	0.042

*Assessed with log-rank test compared with 50 Gy. †Local, regional, or distant relapse, breast cancer death, contralateral breast cancer.

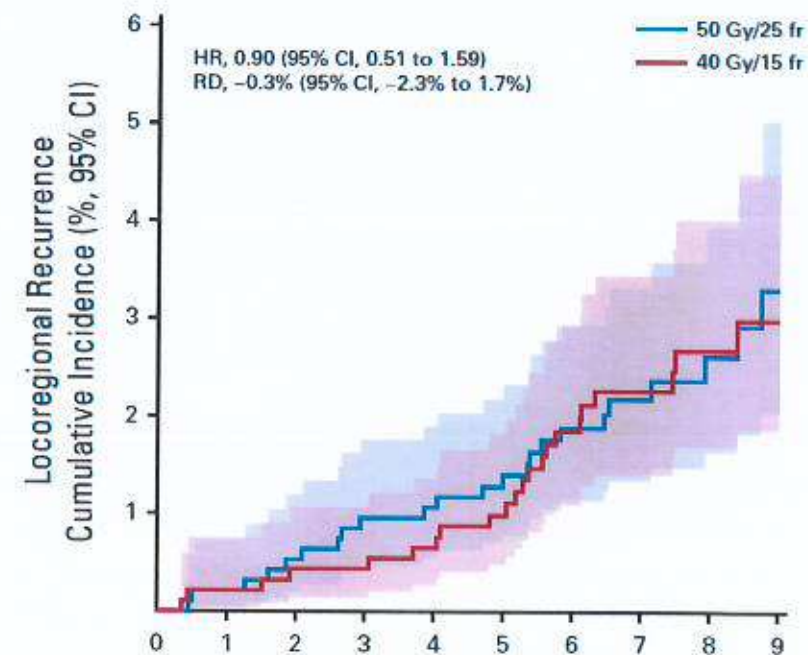
Table 4: Relapse and mortality according to fractionation schedule in START-B

Hipofx Moderado: DBCG Hypo



E. Randomizado mostró hipofx moderado en 15 fracciones fue no inferior en:

- induración, edema, cosmesis, satisfacción
- RLR, SVG

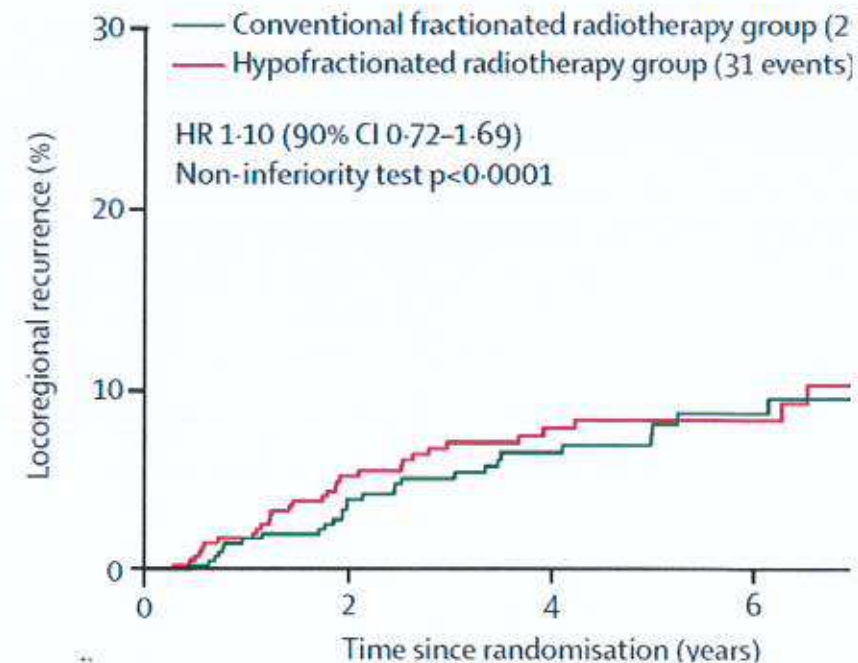


Hipofx Moderado Nodal: China

E. Randomizado mostró hipofx moderado post MT con 43.5 en 15 fracciones con RT nodal fue no inferior en:

- toxicidad con menos radiodermatitis
- RL, SVG

	Conventional fractionated radiotherapy group (n=409)	Hypofractionated radiotherapy group (n=401)
Acute toxicity		
Skin toxicity	..	..
Grade 1-2	357 (87%)	351 (89%)
Grade 3	32 (8%)	14 (3%)
Pneumonitis	..	..
Grade 1	62 (15%)	61 (15%)
Grade 2	7 (2%)	14 (3%)
Grade 3	..	..



Esquemas Ultrahipofraccionados

Fast

5 fracciones en 5 semanas

HYPORT

26 Gy/5 fx en 1 semana (boost int)



Fast Forward

26 Gy/5 fx en 1 semana



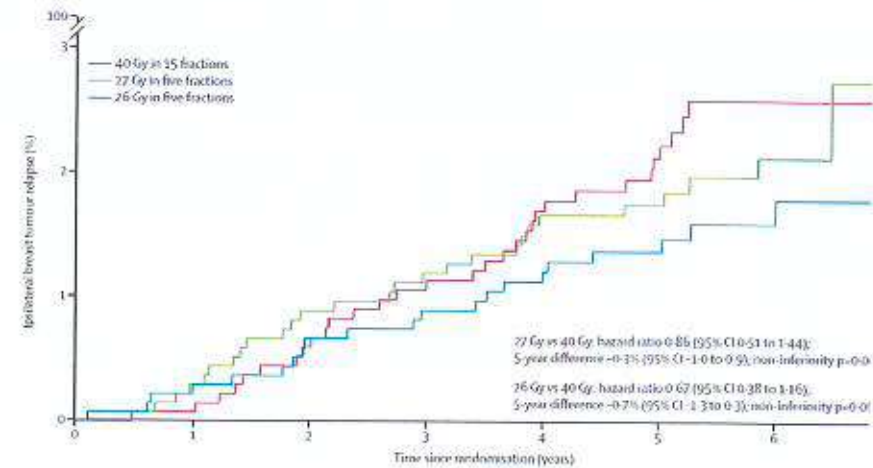
FF Nodal

26 Gy/5 fx en 1 semana

Ultrahipofraccionados: FAST FORWARD

E. Randomizado mostró E. Ultrahipofx de
26 Gy en 5 fx no fue inferior:
-toxicidad
-RL, SVLE

	marked events/total number of assessments over follow-up	hazard ratio (95% CI)	p value for comparison with 40 Gy	p value for comparison between 27 Gy and 26 Gy	hazard ratio for joint follow-up (95% CI); p value
Any adverse event in the breast or chest wall*					0.98 (0.96-1.00); 0.055
40 Gy	651/6121 (10.6%)	1 (ref)			
27 Gy	1004/6303 (15.9%)	1.55 (1.32-1.83)	<0.0001		
26 Gy	774/6327 (12.2%)	1.12 (0.94-1.34)	0.20	0.0001	
Breast distortion†					0.99 (0.95-1.02); 0.38
40 Gy	232/5724 (4.0%)	1 (ref)			
27 Gy	363/5953 (6.1%)	1.51 (1.15-1.97)	0.0028		
26 Gy	299/5945 (5.0%)	1.20 (0.91-1.60)	0.19	0.083	
Breast shrinkage†					1.03 (1.00-1.06); 0.023
40 Gy	230/5728 (5.8%)	1 (ref)			
27 Gy	503/5944 (8.5%)	1.50 (1.20-1.88)	0.0004		
26 Gy	369/5943 (6.2%)	1.05 (0.82-1.33)	0.71	0.0018	
Breast induration (tumour bed)†					1.00 (0.96-1.04); 0.95
40 Gy	185/5713 (3.2%)	1 (ref)			
27 Gy	304/5948 (5.1%)	1.56 (1.19-2.05)	0.0013		
26 Gy	236/5937 (4.0%)	1.19 (0.90-1.59)	0.23	0.047	
Breast induration (outside tumour bed)†					0.96 (0.90-1.02); 0.17
40 Gy	45/5712 (0.8%)	1 (ref)			
27 Gy	137/5943 (2.3%)	2.79 (1.74-4.50)	<0.0001		



Ultrahipofraccionados: FAST FORWARD nodal

E. Randomizado mostró E. Ultrahipofx con RT nodal con 26 Gy en 5 fx no fue inferior:

- linfedema
- otros eventos adversos

Reportados por el médico

Table 27: Clinician-assessed radiotherapy-related adverse effects in Nodal Sub-Study: 1-3 years' follow-up for 40 Gy vs 26 Gy (all randomised patients)

	Year 1		Year 2		Year 3	
	40 Gy N=166 (%)	26 Gy N=169 (%)	40 Gy N=166 (%)	26 Gy N=159 (%)	40 Gy N=135 (%)	26 Gy N=134 (%)
Arm lymphoedema						
No	149 (93)	147 (89)	147 (92)	138 (89)	119 (92)	108 (88)
Yes	11 (7)	19 (11)	13 (8)	17 (11)	11 (8)	15 (12)
<i>Ipsilateral side</i>	11	19	13	17	11	15
Missing	6	3	6	4	5	11
Breast lymphoedema						
No	147 (92)	141 (85)	153 (96)	137 (89)	126 (96)	113 (90)
Yes	12 (8)	24 (15)	7 (4)	17 (11)	5 (4)	12 (10)

Ultrahipofraccionados: FAST FORWARD nodal

E. Randomizado mostró E. Ultrahipofx con
RT nodal con 26 Gy en 5 fx no fue inferior:

-linfedema

-otros eventos adversos

Reportados por pacientes

Table 25: Patient-reported effects in breast / chest wall: baseline to 24 months for 40 G Sub-Study

Breast / chest wall effect	Baseline		3 months		24 months	
	40 Gy N=180 (%)	26 Gy N=181 (%)	40 Gy N=141 (%)	26 Gy N=153 (%)	40 Gy N=127 (%)	26 Gy N=135 (%)
Pain in area of affected breast (EORTC QLQ-BR23)						
Not at all	88 (49)	77 (42)	38 (27)	41 (27)	61 (48)	56 (42)
A little	80 (44)	87 (48)	75 (53)	83 (54)	50 (39)	58 (43)
Quite a bit	9 (5)	12 (7)	21 (15)	22 (14)	12 (9)	14 (10)
Very much	3 (2)	5 (3)	7 (5)	7 (5)	4 (3)	6 (5)
Missing	0	0	0	0	0	1
Swelling in area of affected breast (EORTC QLQ-BR23)						
Not at all	123 (69)	119 (65)	98 (70)	92 (60)	98 (78)	103 (77)
A little	42 (24)	51 (28)	31 (22)	37 (24)	27 (21)	23 (17)
Quite a bit	10 (5)	6 (3)	10 (7)	17 (11)	1 (1)	4 (3)
Very much	3 (2)	5 (3)	2 (1)	7 (5)	0	4 (3)
Missing	2	0	0	0	1	1

Boost Integrado

RTOG 1005

40 / 48 Gy en 3 semanas



IMPORT HIGH

36 / 40 / 48 Gy en 3 semanas



HYPOR

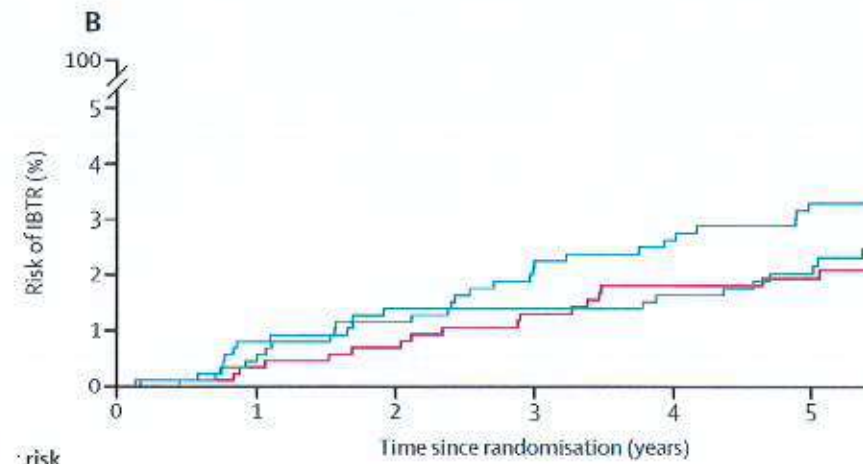
26 / 30 Gy en 1 semana

Boost Int. en 15 Fx: Import High

E. Randomizado mostró boost integrado hasta 48 Gy en 15 fx no fue inferior:

- induración moderada/marcada
- Recurrencias mama ipsilateral

events*		incidence of moderate or marked events (%, 95% CI)†	
		By 3 years	By 5 years
Any adverse event in the breast**			
Control group	283/817 (34.6%)	23.5% (20.7–26.7)	33.1% (29.8–36.7)
Test group 1	271/836 (32.4%)	20.8% (18.2–23.8)	29.9% (26.8–33.3)
Test group 2	302/834 (36.2%)	25.8% (23.0–29.0)	34.5% (31.2–38.0)
Breast distortion			
Control group	126/814 (15.5%)	8.6% (6.8–10.8)	13.8% (11.5–16.6)
Test group 1	108/834 (12.9%)	8.4% (6.7–10.5)	12.2% (10.1–14.8)
Test group 2	140/833 (16.8%)	10.3% (8.3–12.6)	15.7% (13.3–18.5)
Breast shrinkage			
Control group	145/813 (17.8%)	9.4% (7.5–11.6)	15.7% (13.2–18.6)
Test group 1	143/834 (17.1%)	8.9% (7.1–11.0)	15.2% (12.8–18.0)



Boost Int. en 5 Fx: HYPORT

E. Randomizado de 5 fracciones en RT
nodal permitió SIB mostrando en ellas:
-al menos mismo resultado que SIB en 15fx
-ningún evento G3 y muy pocos G2

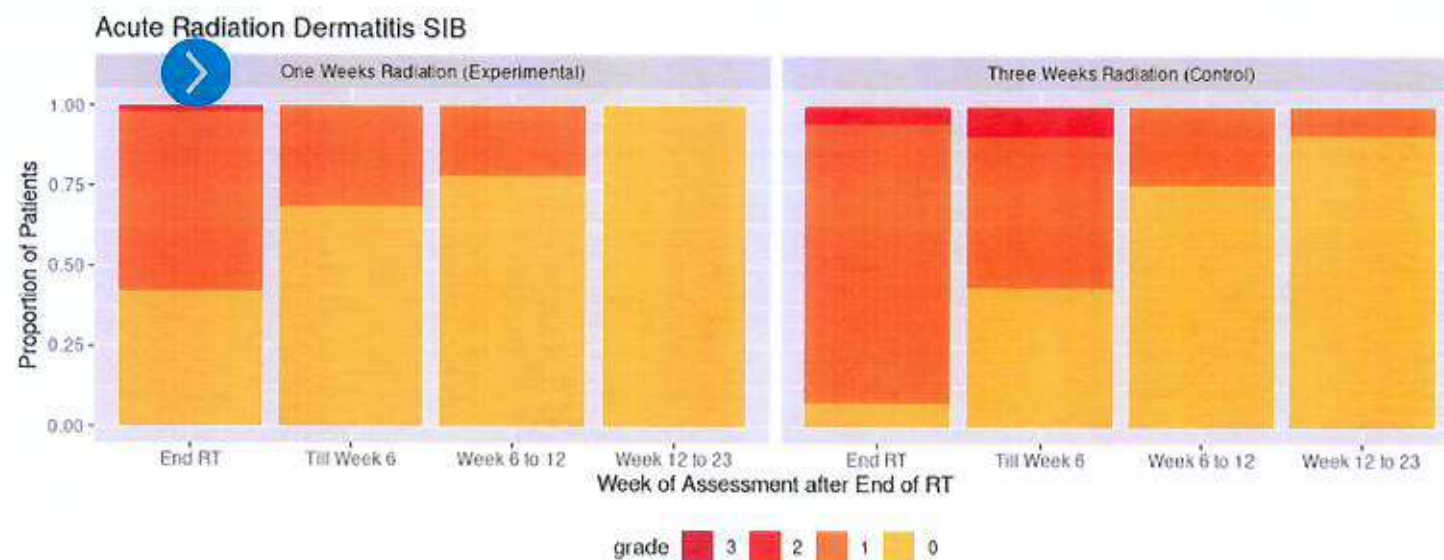


Fig. 3. Prevalence of radiation dermatitis in entire and SIB population at different time points.



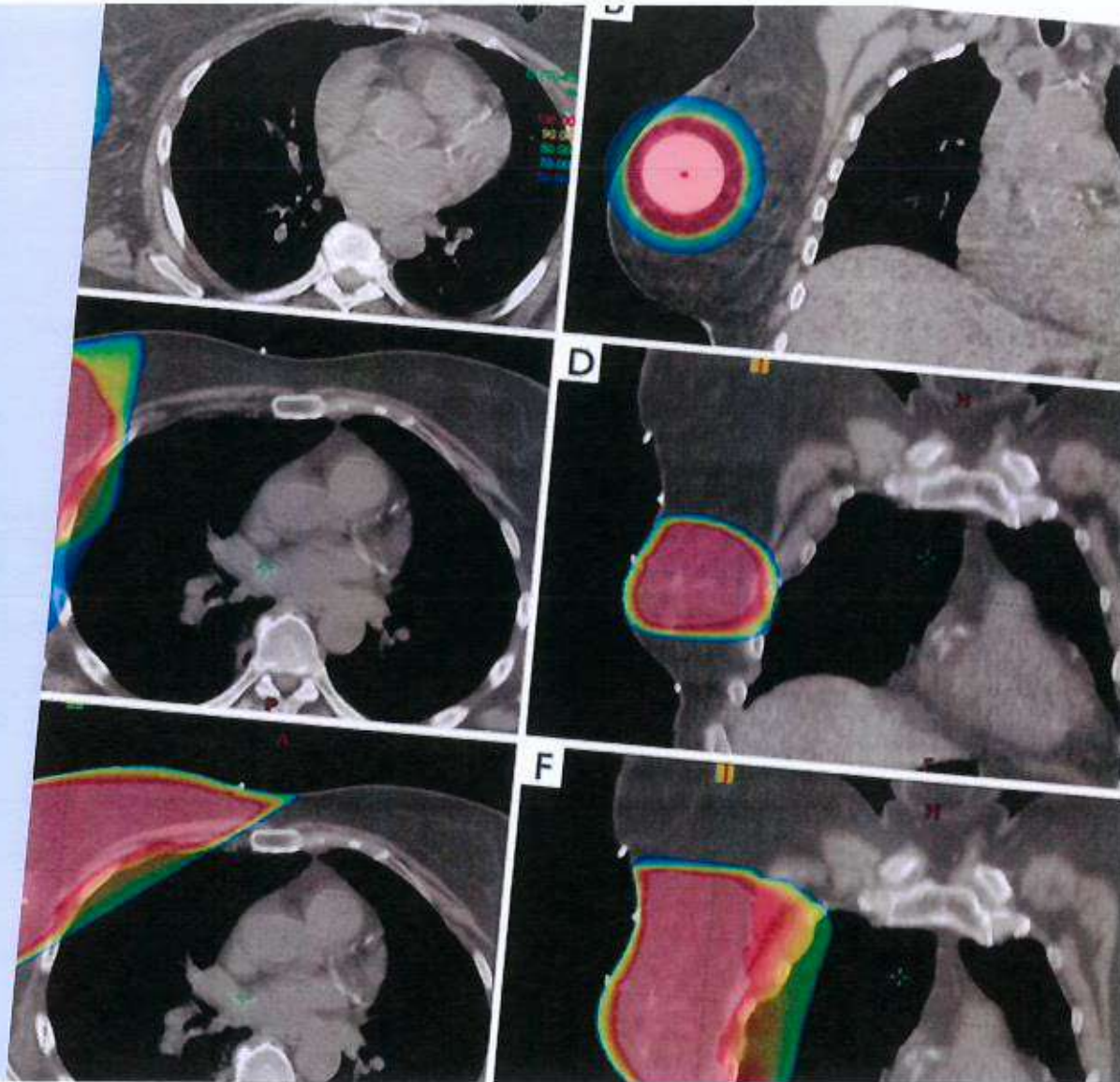
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Disminuir Volúmenes de Irradiación

Menos volumen mama -
APBI

Menos RT nodal
luego de QTneo

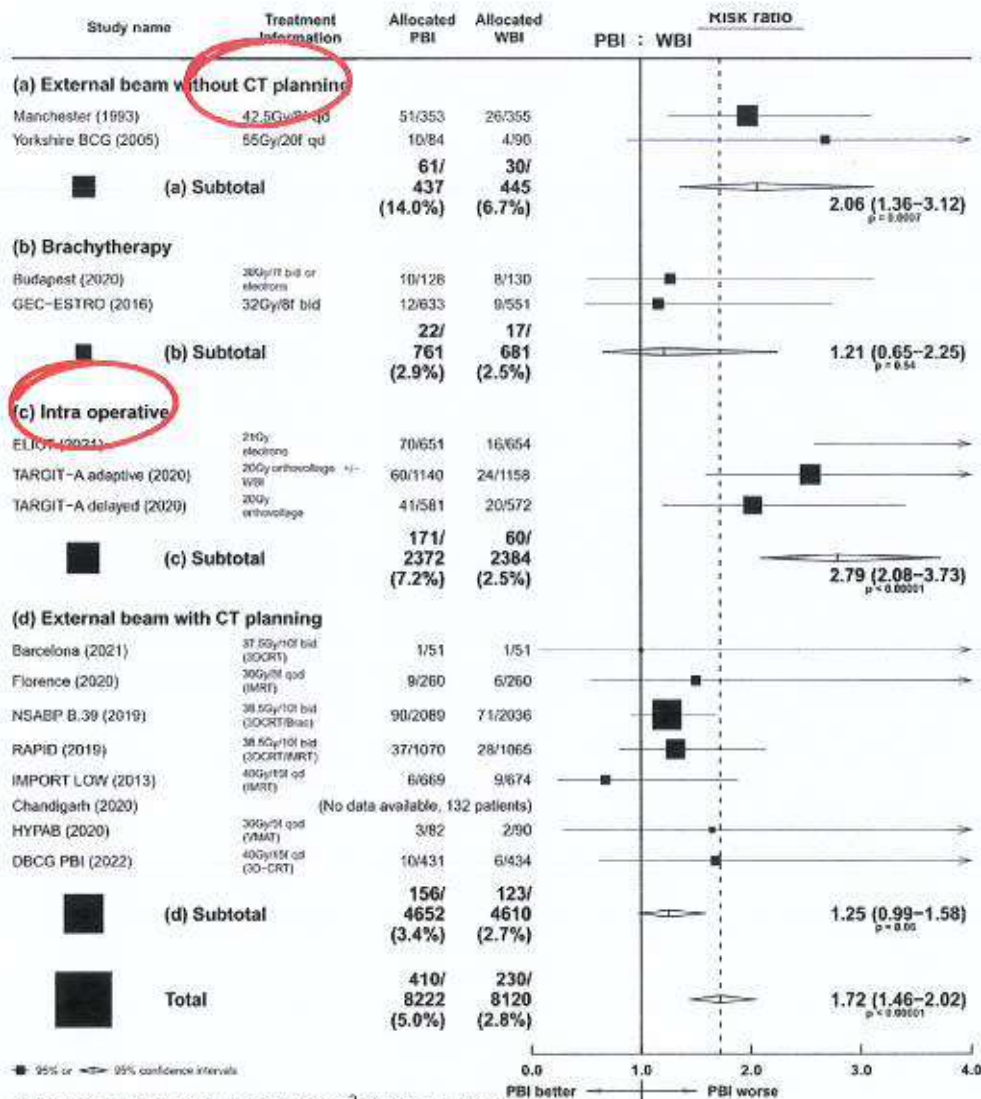
Irradiación Parcial de Mama



Irradiación Parcial: Randomizados

- Excelentes resultados al comparar con WBI
- Importancia de selección, técnica y fraccionamiento

Randomizados	F-up años	n	Técnica RT	LR	SV	Tox. aguda	Tox. tardía	Cosmesis	QoL
RAPID	8.6	2135	WBI: 50 Gy/25 Fx, 42.5 Gy/16 Fx +/- 10 Gy APBI: 38.5 Gy/10 Fx BID (3D)	✓	✓	✗	✗	✗	
INDIA	5	133	WBI: 40 Gy/16 Fx +/- boost APBI: 34 Gy/10 Fx BID (3D)	-	-	✓	✓	✓	
BARCELONA	5	102	WBI: 48 Gy/24 Fx +/- boost 10 Gy/5 Fx APBI: 37.5 Gy/10 Fx BID (3D)	✓	✓	✓	✓		
RTOG 0413	10	4216	WBI: 50 Gy/25 Fx +/- boost APBI: 3DC 38.5 Gy/10 Fx BID o BT 34 Gy	✗	✓	✓	✓	✓/✗ médico	
UK IMPORT LOW	5	2018	WBI: 40 Gy/15 Fx, 36/40 / 15 Fx PBI: 40 Gy/15 Fx (IMRT)	✓	✓		✓	✓	
FLORENCIA	20	520	WBI: 50 Gy/25 Fx + 10 Gy boost APBI: 30 Gy/5 Fx (IMRT)	✓	✓	✓	✓	✓	✓
DANÉS	7.6	865	WBI: 40 Gy/15 Fx APBI: 40 Gy/15 Fx	✓	✓		✓		



Heterogeneity between 4 subtotals: $\chi^2 = 19.6$; $p = 0.0002$

Heterogeneity within subtotals: $\chi^2 = 6.7$; $p = 0.75$

Heterogeneity between 4 subtotals: $\chi^2 = 26.9$; $p = 0.0001$

Irradiación Parcial: Técnica

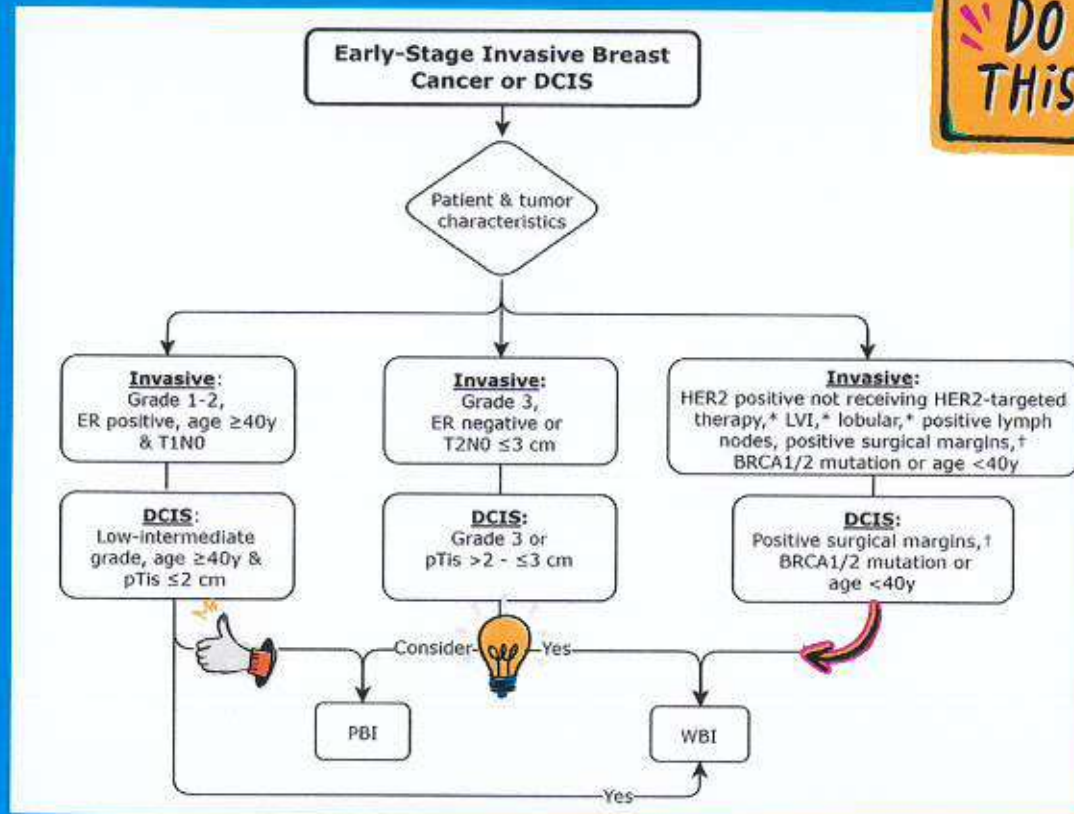
Meta-análisis: técnica importa
(IJROBP 2023; 115(1): 60–72)



Irradiación Parcial: Selección de Pacientes

Guía actualizada ASTRO

(Practical Radiation Oncology 2024; 14:112–132)



Irradiación Parcial: Fraccionamiento

KQ3 Recommendations	Strength of Recommendation	Quality of Evidence (refs)
1. For patients with early-stage invasive breast cancer or DCIS receiving external beam PBI, 3000 cGy in 5 once daily fractions delivered on nonconsecutive days within 2 weeks is recommended.	Strong	Moderate 12,14
2. For patients with early-stage invasive breast cancer or DCIS receiving external beam PBI, 4005 cGy in 15 once daily fractions over 3 weeks is recommended.	Strong	Moderate 9
3. For patients with early-stage invasive breast cancer or DCIS receiving PBI with HDR brachytherapy, 3010 cGy in 7 fractions, 3200 cGy in 8 fractions, 3400 cGy in 10 fractions delivered twice daily or 5000 cGy with 160-180 cGy/hour PDR is recommended. <u>Implementation remark:</u> Single-entry PBI trials used 3400 cGy in 10 fractions delivered twice daily.	Strong	Moderate 7,18
<i>Abbreviations:</i> DCIS = ductal carcinoma in situ; HDR = high-dose-rate; KQ = key question; PBI = partial breast irradiation; PDR = pulsed-dose-rate.		

Guía actualizada ASTRO
(Practical Radiation Oncology
2024: 14:112–132)

De-escalate RT nodal post QTneo con pCR

NRG
ONCOLOGY

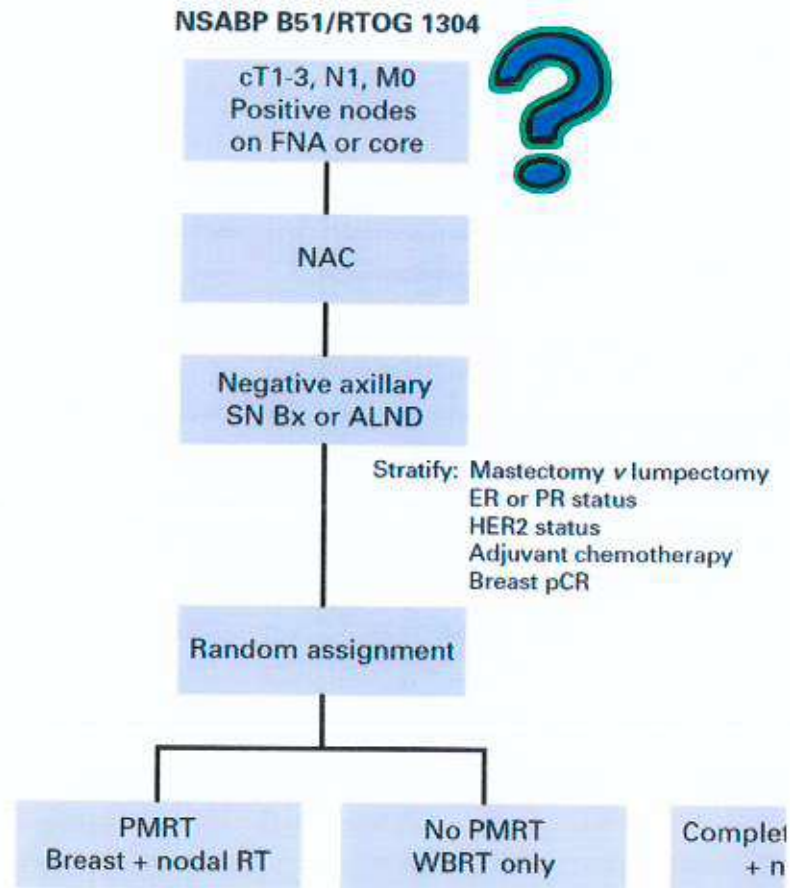
Advancing Research. Improving Lives.™



8 DEC 5-9, 2023
SAN ANTONIO
BREAST CANCER
SYMPOSIUM

Loco-regional Irradiation in Patients with Biopsy-proven Axillary Node Involvement at Presentation Who Become Pathologically Node-negative After Neoadjuvant Chemotherapy: Primary Outcomes of NRG Oncology/NSABP B-51/RTOG 1304

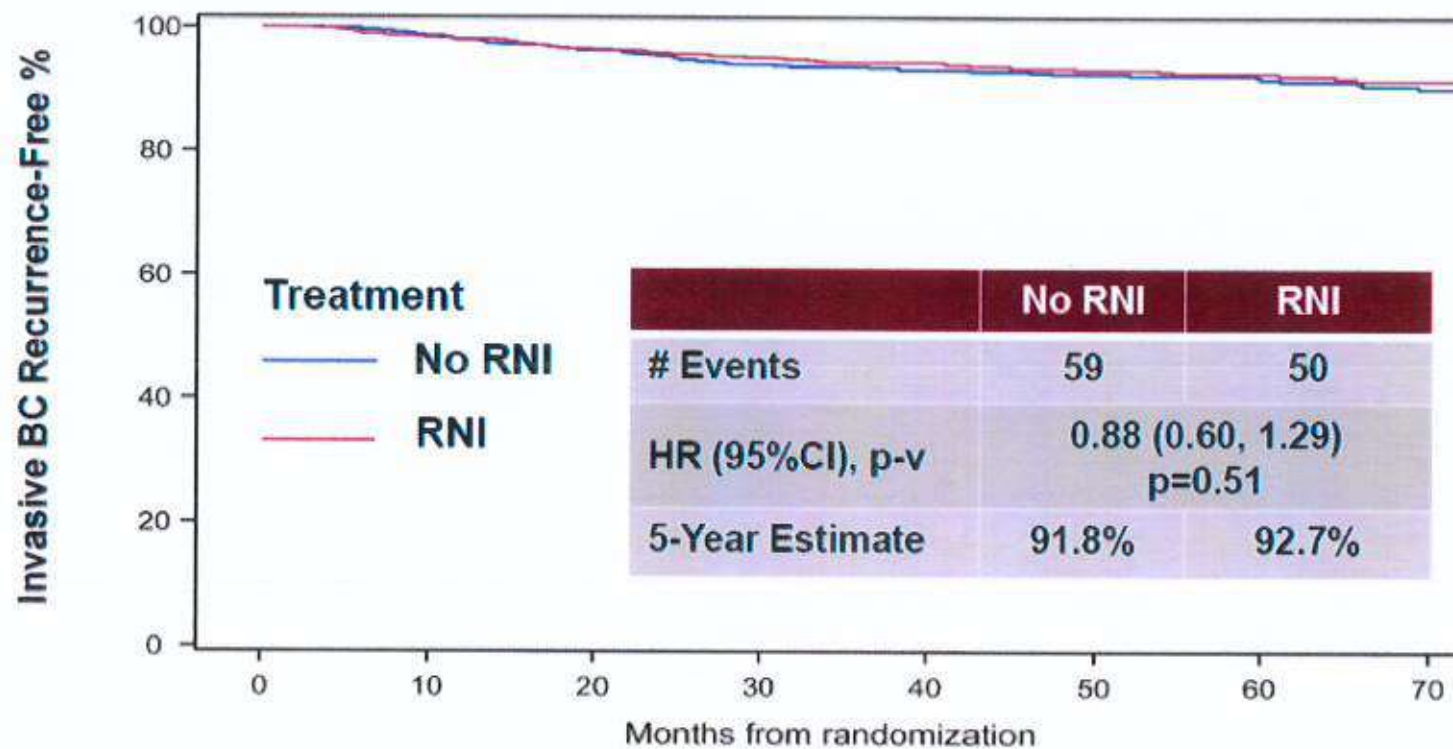
Eleftherios P. Mamounas^{1*}, Hanna Bandos², Julia R. White^{3*}, Thomas B. Julian⁴, Atif J. Khan⁵, Simona F. Shaitelman⁶, Mylin A. Torres⁷, Frank A. Vicini⁸, Patricia A. Ganz⁹, Susan A. McCloskey¹⁰, Peter C. Lucas^{11,12}, Niliendu Gupta³, X. Allen Li¹³, Beryl McCormick⁵, Saumil Gandhi⁶, Rahul D. Tendulkar¹⁴, Vivek S. Kavadi¹⁵, Masahiko Okamoto¹⁶, Samantha Andrews Seaward¹⁷, William J. Irvin, Jr.¹⁸, Jolinta Lin⁷, Robert Mutter¹⁹, Thierry M. Muanza²⁰, Andrew A. Muskovitz²¹, Reshma Jagsi²², Anna C. Weiss^{23,24}, Walter J. Curran, Jr.⁷, and Norman Wolmark¹²



De-escalar RT Nodal post QTneo con pCR

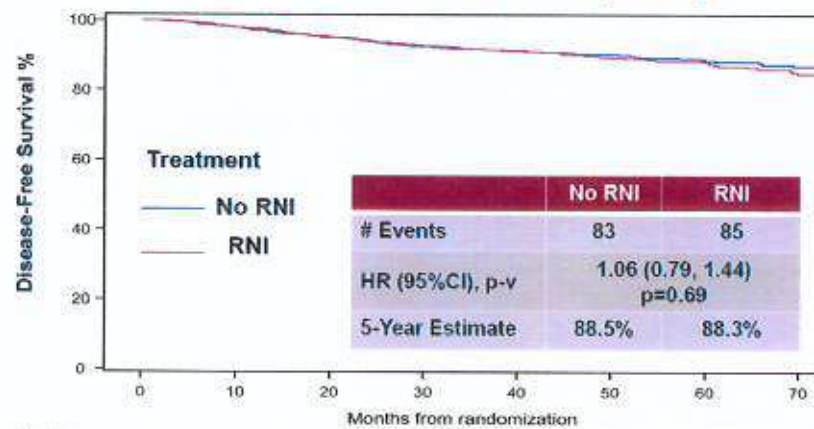
¿Realmente necesitan la RT nodal estas pacientes de bajo riesgo con respuesta completa a QTneo?

De-escalar RT Nodal post QTneo con pCR



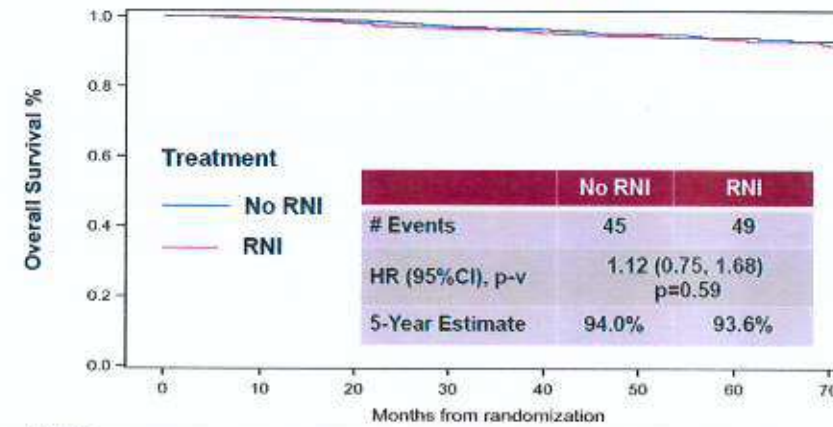
De-escalar RT Nodal post QTneo con pCR

Disease-free Survival (DFS)



No RNI	784	752	693	602	500	389	300	210
RNI	772	722	677	635	485	350	287	193

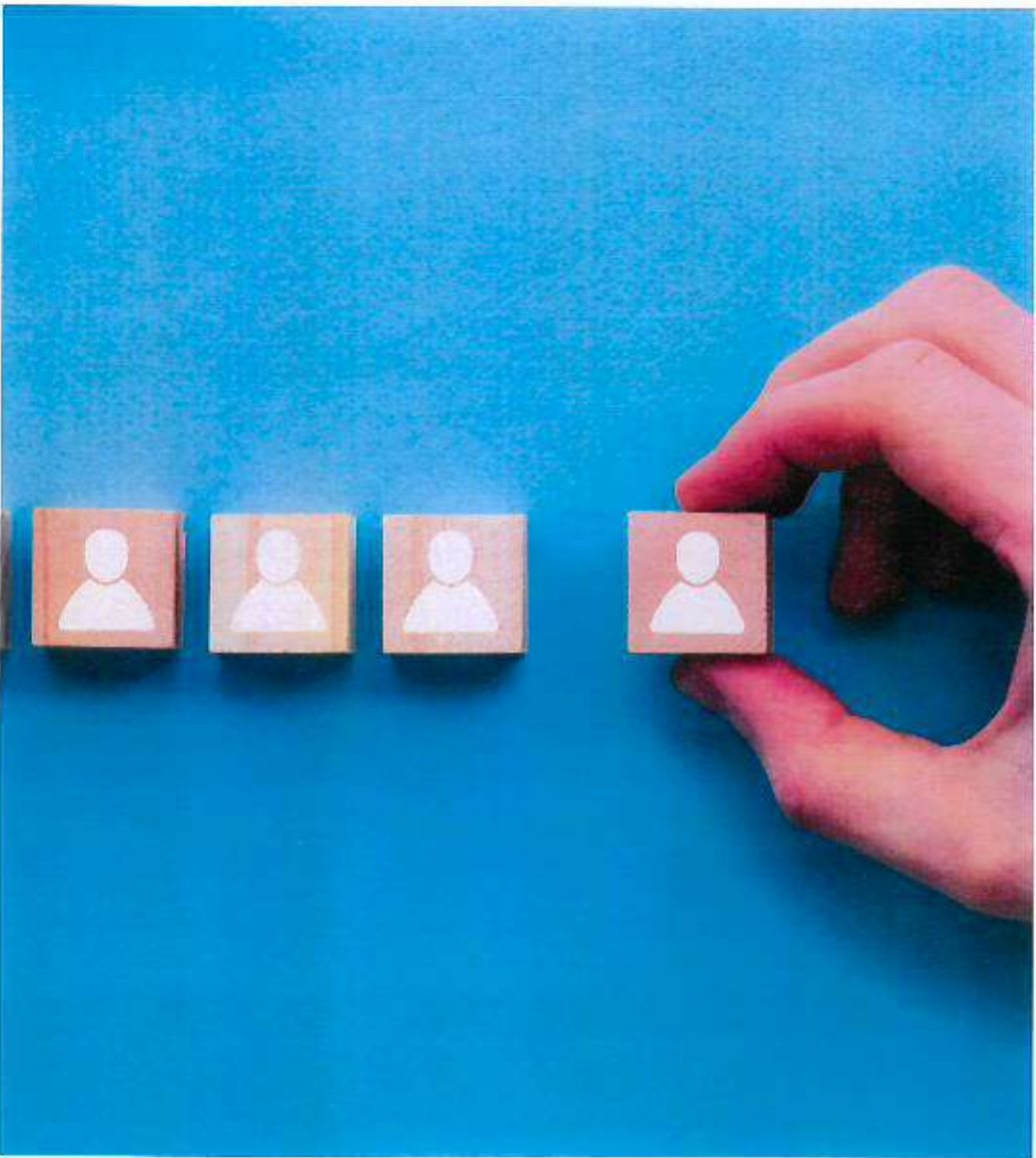
Overall Survival (OS)



No RNI	802	779	761	695	591	482	371	263
RNI	800	762	730	675	609	459	300	247

De-escalar RT Nodal post QTneo con pCR

Toxicity	No RNI (%) n=800	RNI (%) n=759
Grade 0-1	58.0	37.2
Grade 2	35.4	52.3
Grade 3	6.5	10.0
Grade 4	0.1	0.5
Radiation Dermatitis (Grade 3)	3.3%	5.7%



udp

Omisión de Radioterapia

Como seleccionamos a las candidatas a omisión

Omisión en CDIS: RTOG 9804

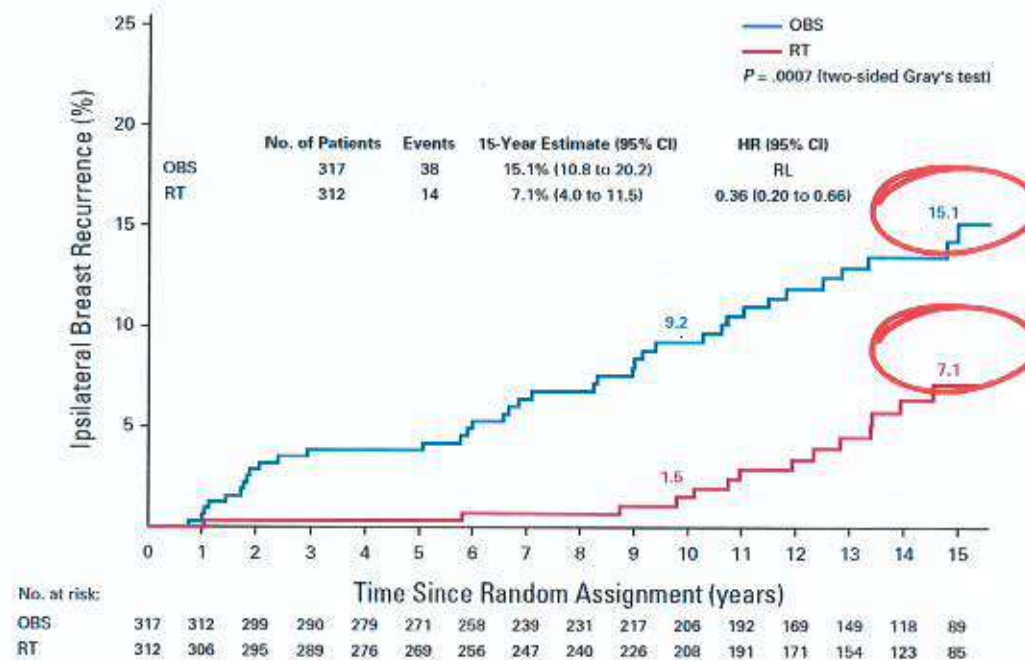
Mujeres consideradas "good risk":

- CDIS unifocal
- <2.5 cm
- GN1/2
- Márgenes 3 mm

Randomizadas a:

- Observación +/- TMX
- RT +/- TMX

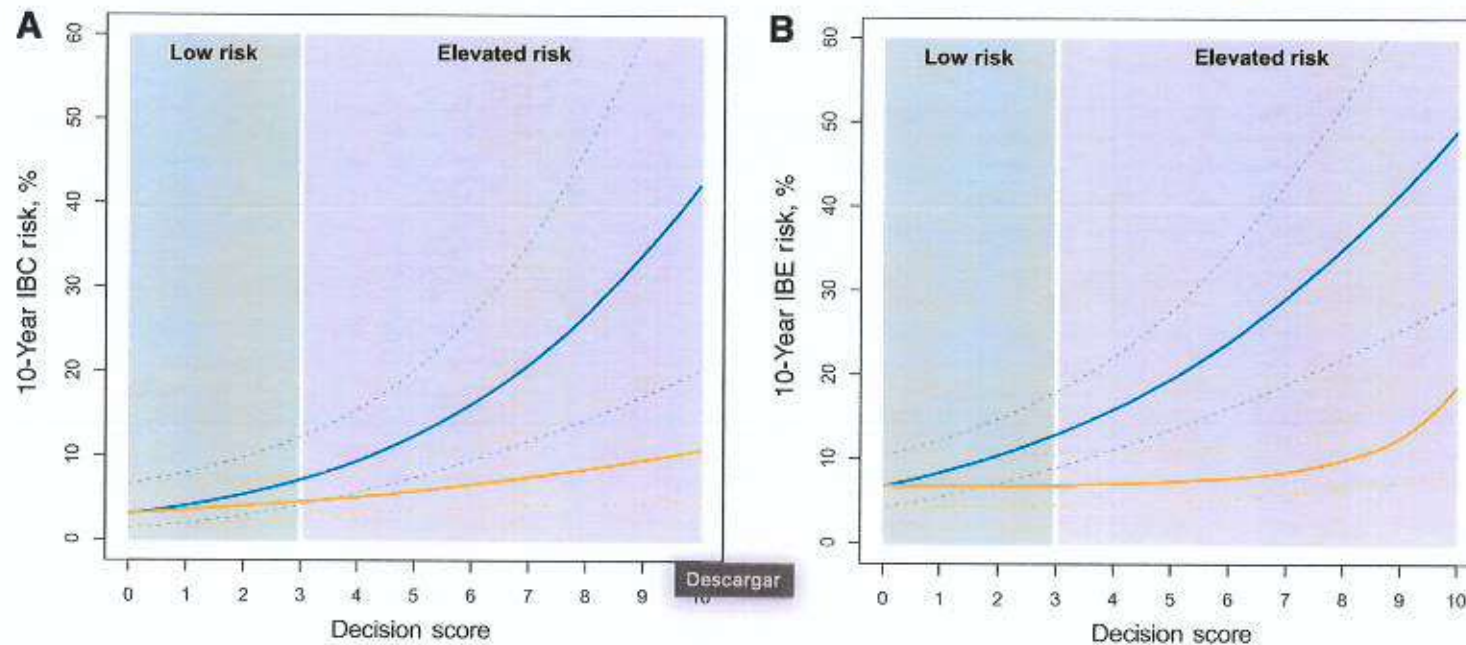
(JCO 2021; 39(32): 3574-83)



DCISion RT

Plataforma genómica que logra separar a pacientes en riesgo bajo y alto.

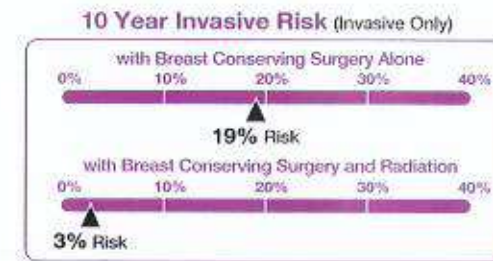
Los pacientes de riesgo bajo podrían considerarse para omisión. (Clin Cancer Res 2018; 24(23); 5895–901.)



DCISion RT

Plataforma genómica que logra separar a pacientes en riesgo bajo y alto.

Los pacientes de riesgo bajo podrían considerarse para omisión. (Clin Cancer Res 2018; 24(23); 5895–901.)



Omisión en Etapa Temprana



PRIME II

Kunkler, NEJM 2023

LUMINA

Whelan, NEJM 2023



IDEA

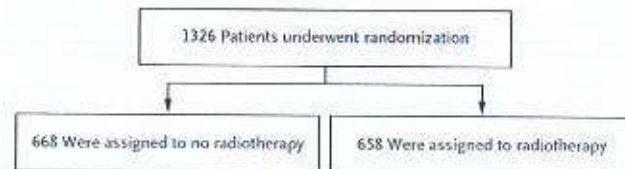
Jagsi, JCO 2023

Omisión en Etapa TempranaA: PRIME II

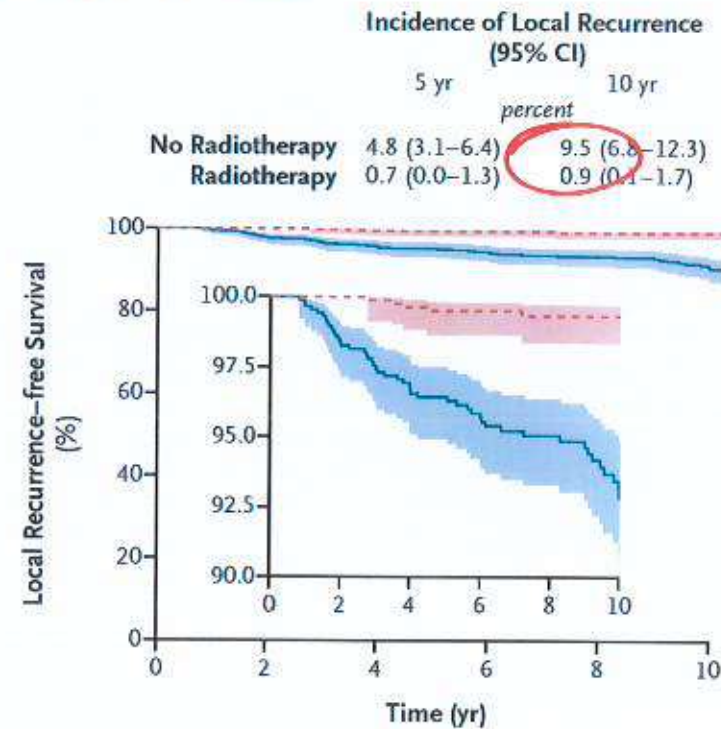
- Estudio randomizado de omisión de RT en cáncer infiltrante de bajo riesgo:

- >65 años
- $t_u < 3$ cm
- N-
- RH+

(N Engl J Med 2023; 388: 585-94)

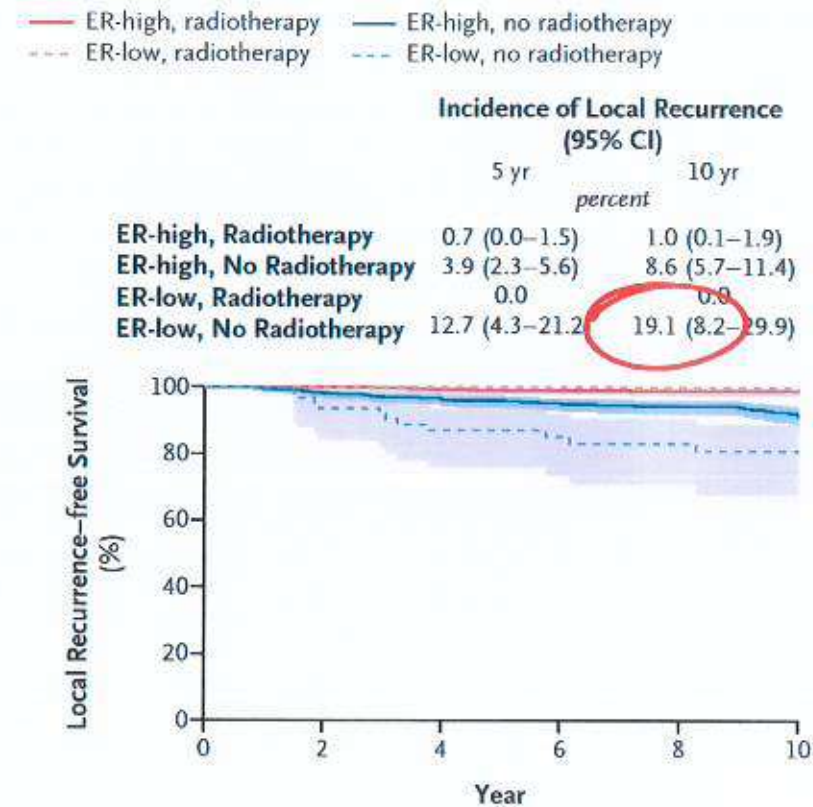


A Local Recurrence-free Survival



Omisión en Etapa Temprana: PRIME II

- Análisis de subgrupos
 - Beneficio de RT es mayor en RE < 50%
 - RE alto tienen casi 10% falla a 10 años sin RT
- Factores clínicos no son buenos para seleccionar a pacientes para omisión
(N Engl J Med 2023; 388: 585-94)



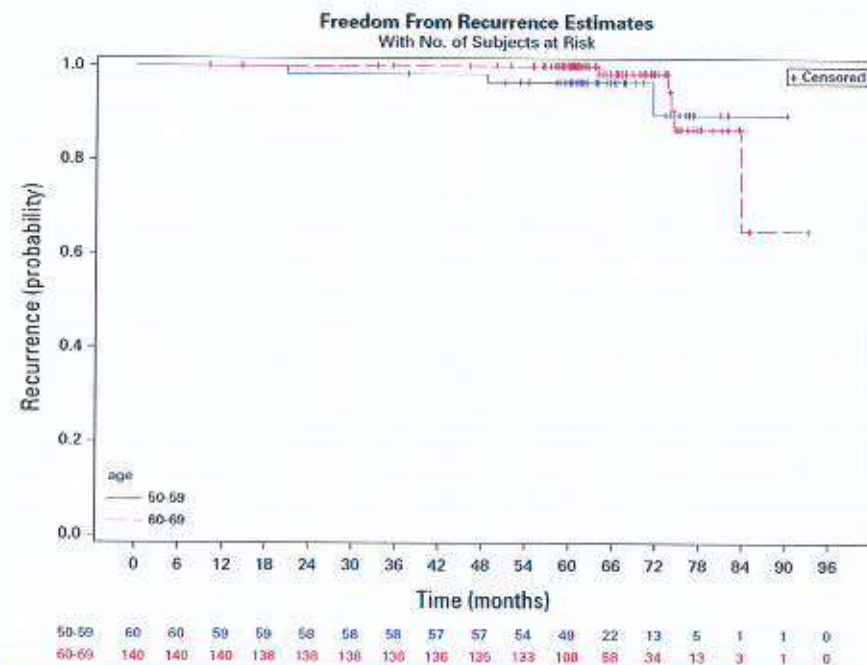


FIG 1. Freedom from recurrence in relation to age cohort.

Omisión en Etapa Temprana: IDEA

(J Clin Oncol 2023; 42:390-398)

En base a la clínica podemos seleccionar a pacientes >65 años de riesgo no muy alto

Evaluar firma genómica para seleccionar omisión RT en mujeres postmenopausicas 50 - 69 años:

- T1N0
- RE+, RP+, HER2-
- Oncotype Dx ≤ 18



De-escalar Tratamiento

TABLE 3. Trials Evaluating De-Escalation in Low-Risk Breast Cancer

Characteristic	IDEA	LUMINA	PRECISION	PRIMETIME	EXPERT	Natural	EUROPA	DEBRA
Design	Single arm	Single arm	Single arm	Single arm	Randomized	Randomized	Randomized	Randomized
Years	2015-2018	2013-2017	2016-present	2017-2022	2017-present	2018-present	2021-present	2021-present
Accrual goal	200	501	672	2,400	1,167	926	926	1,670
Age, years	≥50-≤69	≥55	≥50-≤75	≥60	≥50	≥60	≥70	≥50-≤70
T stage	pT1	pT1	pT1	pT1	pT1	pT1	pT1	pT1
N stage	pN0, pN0(IHC+)	pN0	pN0, pN0(IHC+)	pN0	pN0, pN0(IHC+)	pN0	cN0, pN0, pN0(IHC+)	pN0
Grade	Any	1-2	1-2	1-2	1-2	1-2	Any if ≤1 cm 1-2 if >1 cm	Any
Biologic criteria	Oncotype Score ≤18 IHC ER/PR+ HER2-	IHC ER ≥1% PR ≥20% HER2- Ki67 ≤13.25%	PAM-50 Low risk IHC ER/PR ≥10% HER2-	IHC ER/PR+ HER2- IHC4+C Very low	PAM-50 Luminal A ROR ≤60	IHC ER ≥10% HER2-	IHC ER/PR ≥10% HER2- Ki67 ≤20%	Oncotype Score ≤18 IHC ER/PR ≥1% HER2-
Trial arms	ET	ET	ET	ET	ET v ET + RT	ET v ET + APBI	ET v APBI	ET v ET + RT

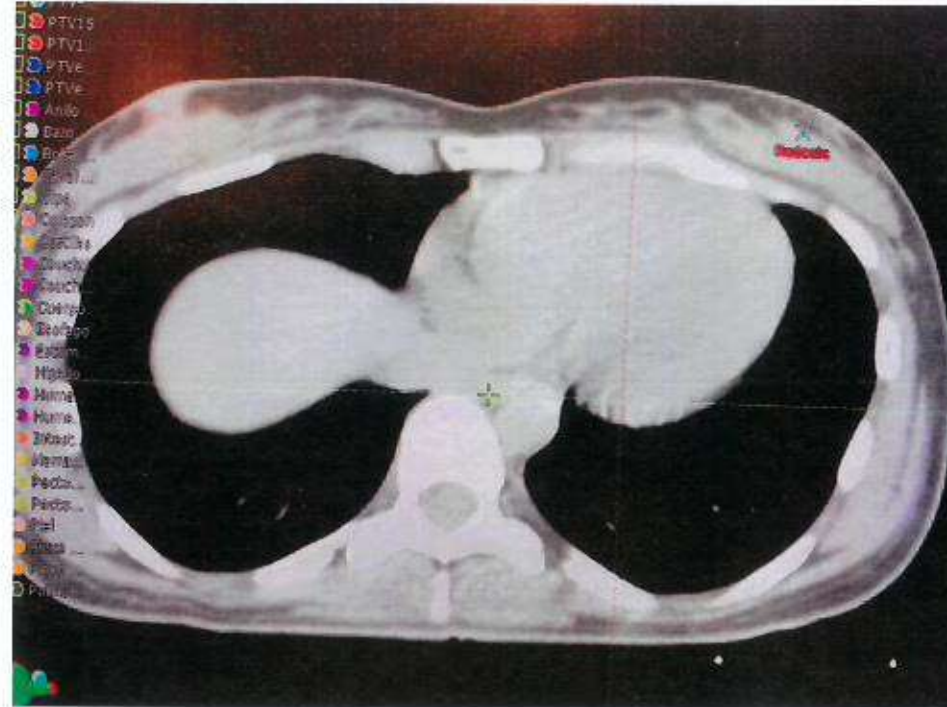
Abbreviations: APBI, Accelerated Partial Breast Radiation; DEBRA, De-Escalation of Breast Radiation; ET, endocrine therapy; EUROPA, Exclusive Endocrine Therapy or Radiation Therapy; EXPERT, Examining Personalized Radiation Therapy; HER2, human epidermal growth factor receptor 2; IDEA, Individualized Decisions for Endocrine Therapy Alone; LUMINA, Luminal A; Natural, RT Natural Trial; PRECISION, Profiling Early Breast Cancer for Radiotherapy Omission; PRIMETIME, Postoperative Avoidance of Radiotherapy; RT, radiation therapy.

(J Clin Oncol 2023; 42:390-398)

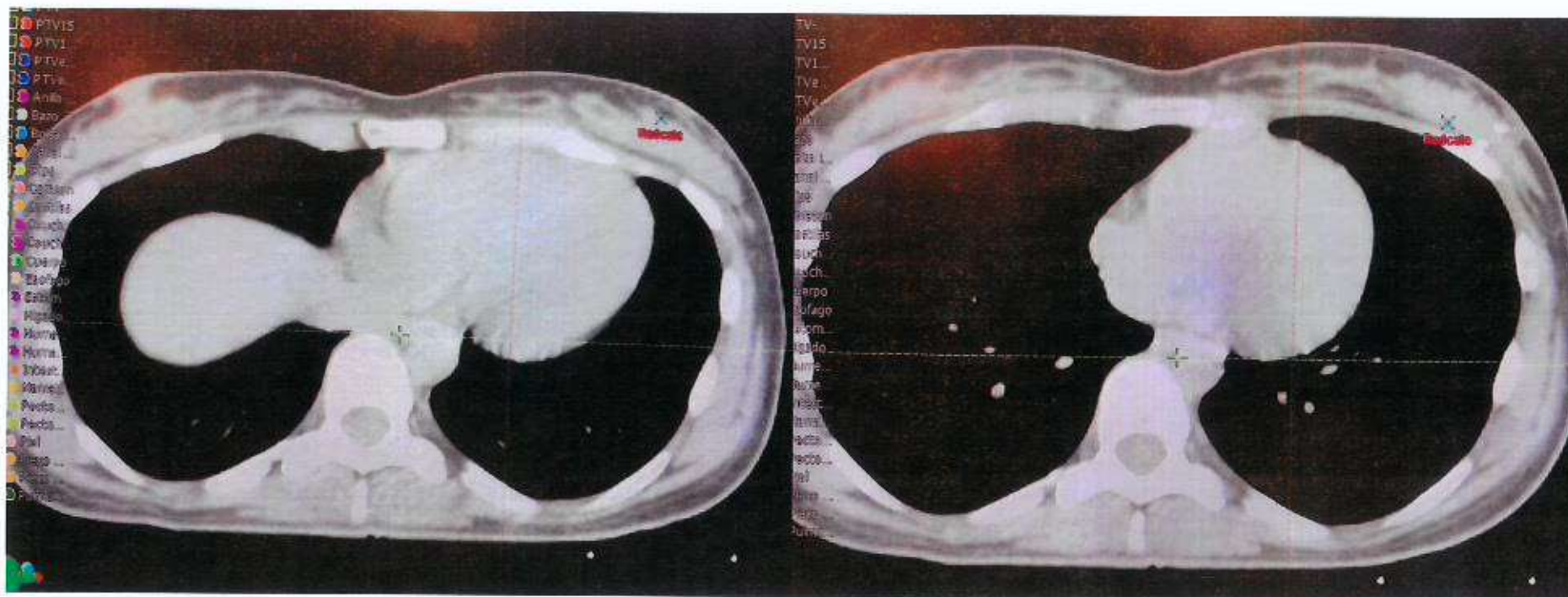
CASO CLÍNICO

Mujer 30 años
DG: CDI mama izquierda
cT2N0M0 LB HER2

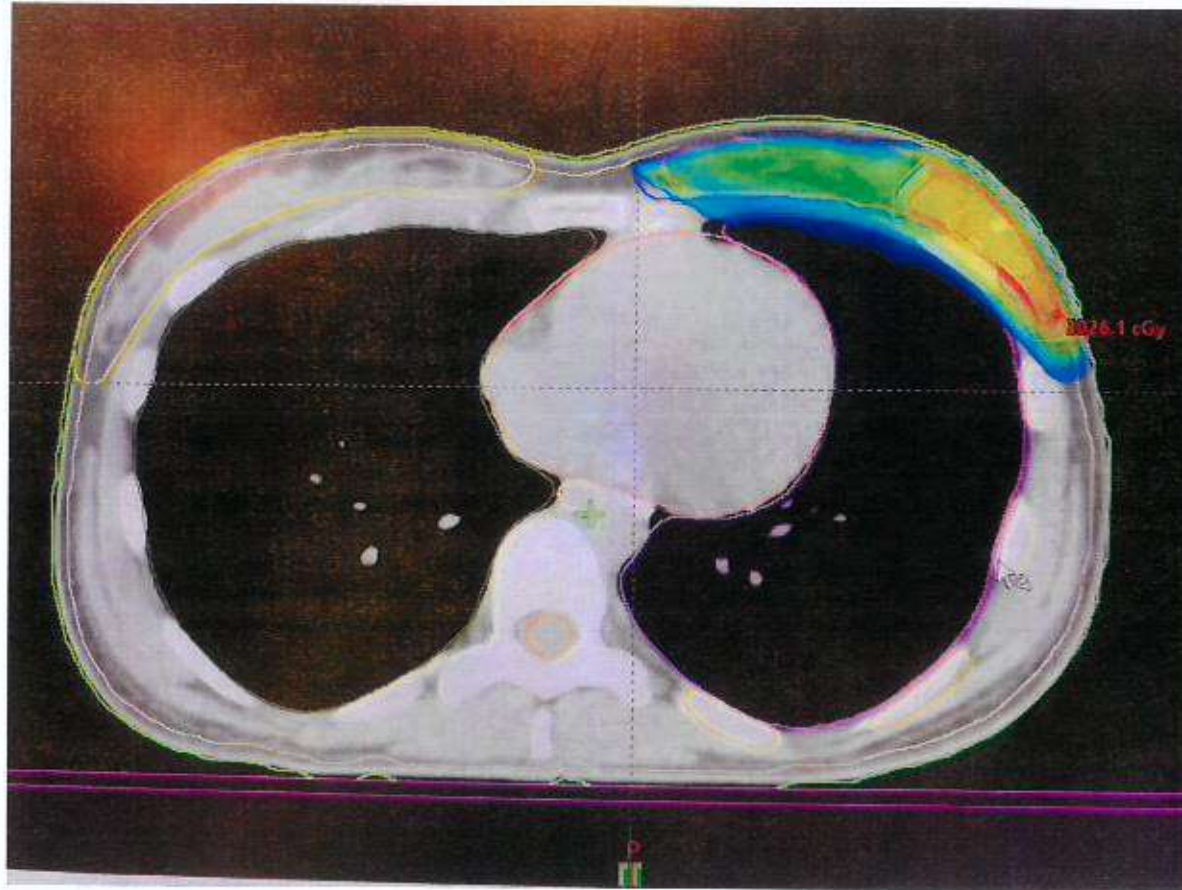
QTneo + Phesgo
MP IZQ + GC: tu 8 mm (yp T1N0M0)
TDM1
PLAN: RT 26 Gy 5 fracciones a mama
izquierda + boost



CASO CLÍNICO



CASO CLÍNICO



Resumiendo



- Novedades más relevantes en RT siguen orientadas a disminuir toxicidad:
 - Menos volumen: APBI y de-escalar RT regional en pCR
 - Menos fracciones: Hipofx moderado y ultra y SBRT
 - Uso de plataformas genómicas para omisión
 - Control Respiratorio / IMRT / VMAT



¡GRACIAS!

udp

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