Early results of the French multicenter, randomized SHARE trial comparing whole breast irradiation versus accelerated partial breast irradiation in postmenopausal women with early-stage breast cancer

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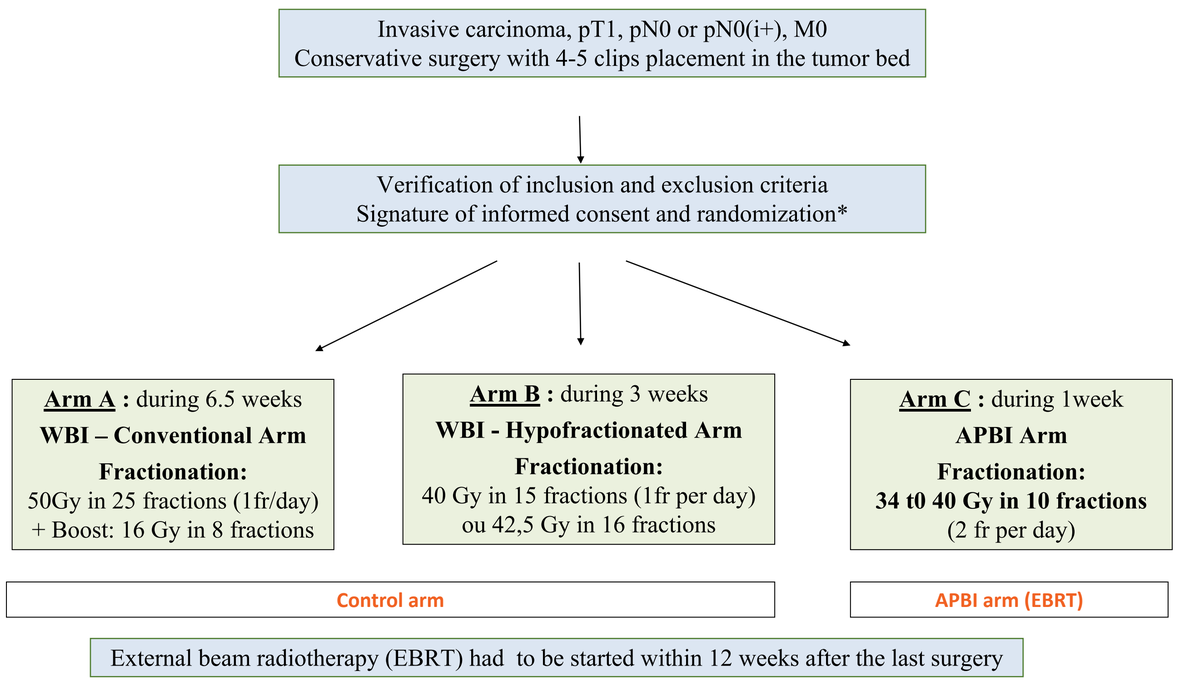
Purpose

The aim is to report toxicity and cosmetic outcomes at 3 and up to 9 years of follow-up of post-menopausal patients randomized to receive either standard whole breast irradiation (WBI), including hypofractionated options, versus accelerated partial breast irradiation (APBI).

Methods

SHARE (NCT01247233): national, non-inferiority, randomized, open-labeled, Phase III trial, sponsored by Unicancer, comparing APBI versus WBI in terms of local control as primary objective.

Trial overview



Statistical considerations

Secondary endpoints were severe toxicity (NCI-CTCAE v4 grade ≥ 2), and cosmetic results.
For both outcomes, we estimated the cumulative incidences (CI) using Kalbfleish and Prentice method, considering disease relapse, secondary cancer or death as competing events. Treatment effect (APBI vs WBI) was estimated by cause-specific Hazard Ratios (cs-HR) from Cox models.

Results

Median follow-up was 5.8y (range, 0.13-9.5).
The number of deaths was 27, and the number of local relapses was 11. Among the 978 patients, 582 and 396 had finally WBI and APBI, respectively. Analyses in modified-ITT concerned 488 and 490 patients in the WBI and APBI arms, respectively.

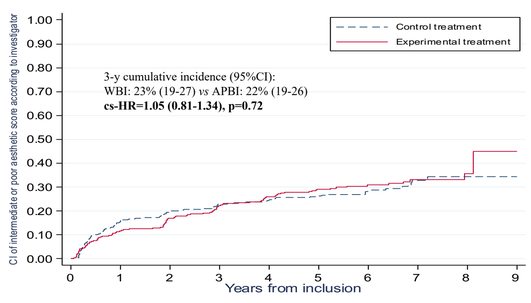
○ Patients caracteristics

Characteristics	WBI N = 488		APBI N = 490		Total N= 978	
Age (y) median (Range)	65	(49-86)	65	(50-89)	65	(49-89)
Classification pT (MD=1)						
pT1	483	99%	480	98%	963	99%
pT2	2	<1%	8	2%	10	1%
pT3	0	0%	1	<1%	1	<1%
Micro-invasive + in Situ	2	<1%	1	<1%	3	<1%
Classification pN						
pN0	479	98%	485	99%	964	99%
pN0(i+)/ pN1	9	2%	5	1%	14	1%
SBR Grade (MD=3)						
G1	230	47%	215	44%	445	46%
G2	241	50%	260	53%	501	51%
G3	12	2%	11	2%	23	2%
Type of surgery (MD=1)						
Lumpectomy	420	86%	417	85%	837	86%
Quadrantectomy	68	14%	72	15%	140	14%
Clip placement (MD =6)						
≤ 3	9	2%	12	3%	21	2%
4	282	58%	247	50%	529	54%
≥ 5	193	40%	229	47%	422	44%
Surgical margins						
Clear margins (>2mm)	485	99%	485	99%	970	99%
Close or positive margins	3	1%	5	1%	8	1%

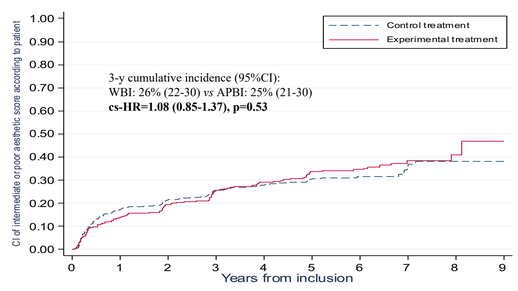
○ Cosmetic results

Cumulative incidence of poor cosmetic score

According to the investigator



According to the patient

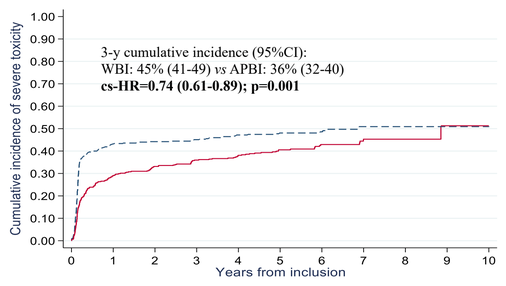


○ Toxicity results

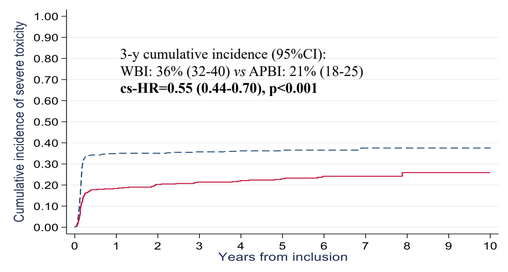
Control: WBI (arms A+B)
Experimental: APBI (arm C)

Cumulative incidence of severe toxicity

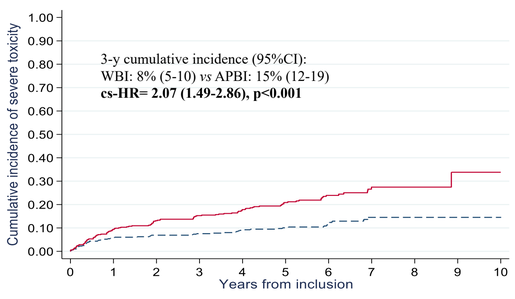
Any type of toxicities



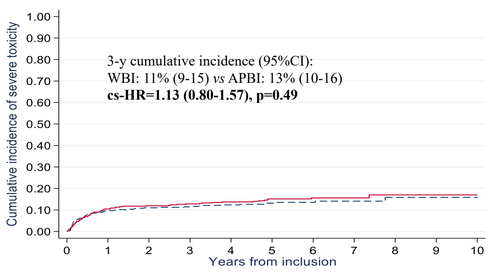
Breast skin toxicity



Breast other toxicities



Other AE



Conclusion

Historically SHARE is the first APBI trial that included hypofractionated schedules in the standard arm. We report increased risk of severe toxicity and skin breast toxicity in standard arm as compared with APBI arm without any difference in terms of cosmetic results. Longer follow-up is needed.

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