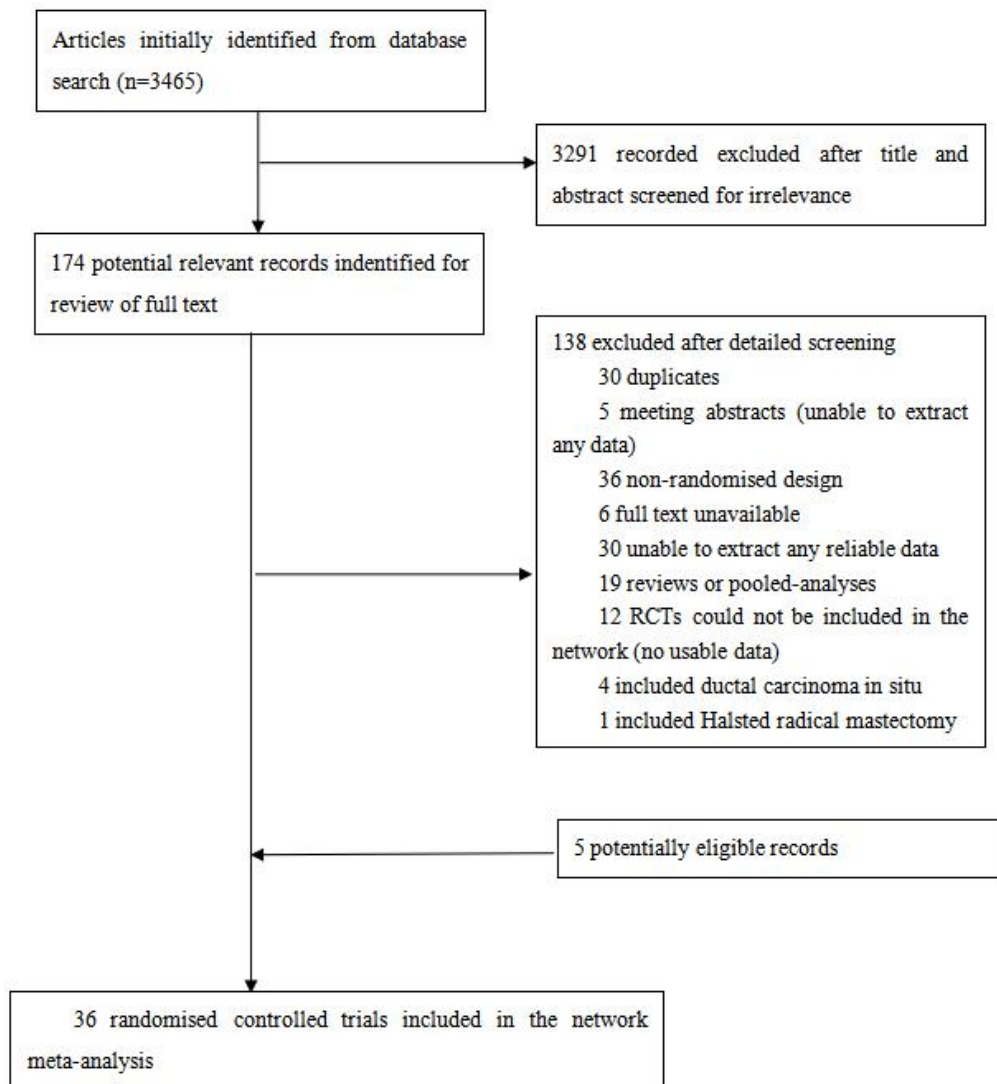


SUPPLEMENTARY MATERIALS

Supplementary Figures

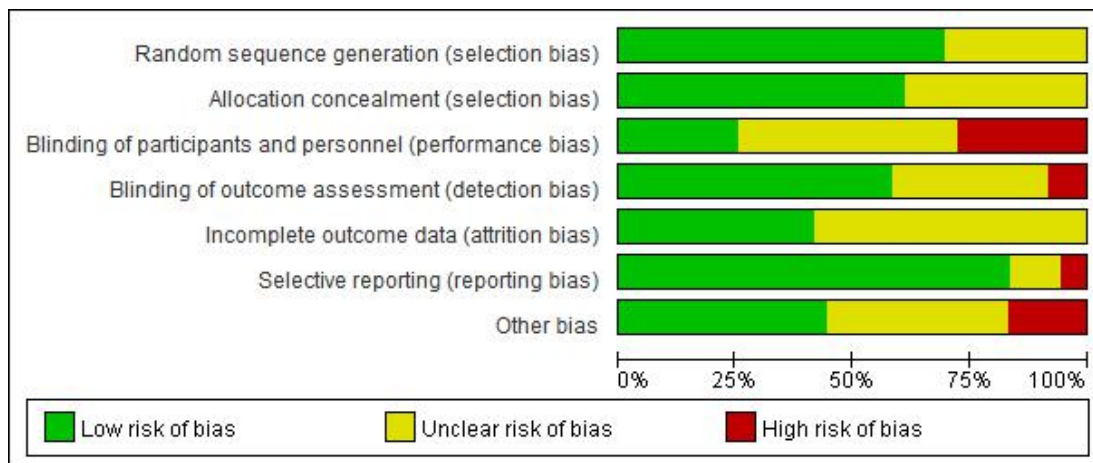


Supplementary Figure 1. Flow diagram depicting the literature search and criteria for selection of the included studies.

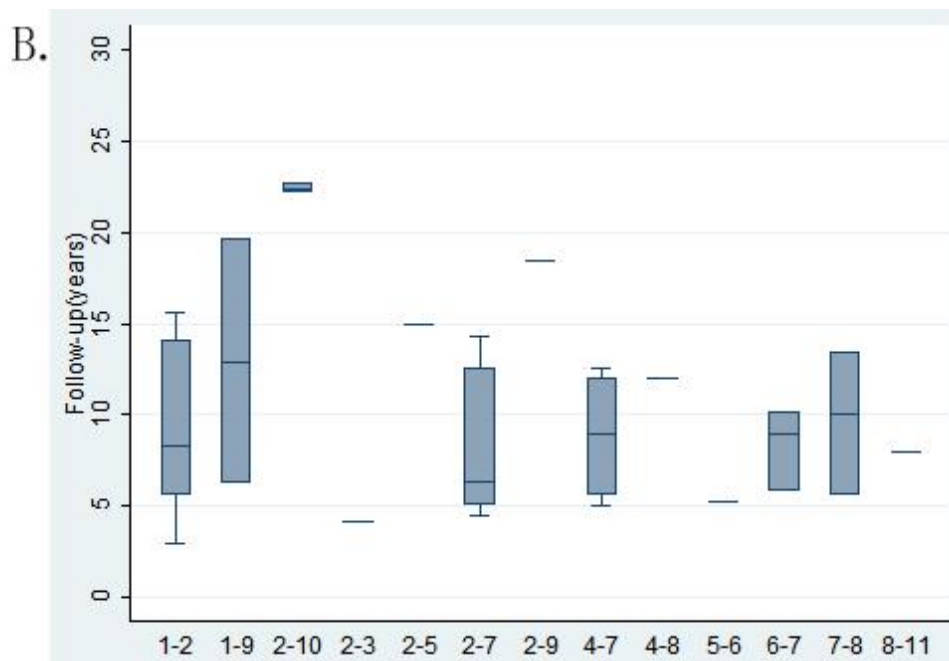
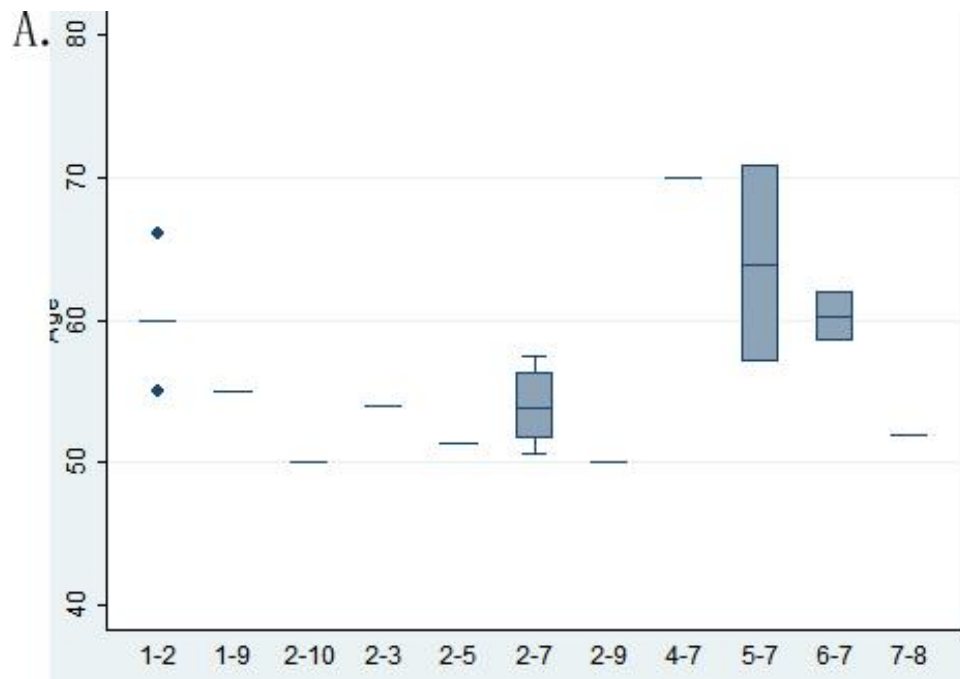
A.

	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)	Other bias
Agresti 2014	+	+	?	?	+	+	+
Arriagada 2003	+	+	?	+	?	+	+
BLICHERT-TOFT 2008	+	+	?	+	?	+	+
Cabanes 1992	+	?	?	+	+	+	?
Canavese 2016	+	+	?	+	?	+	+
Chetty 2000	?	?	+	+	?	+	+
Clark 1996	+	+	?	+	?	+	+
FISHER 1995	+	+	+	+	?	+	+
FISHER 2002	?	?	+	+	+	+	?
Fyles 2004	+	+	+	+	+	+	+
Galimberti 2013	+	+	?	+	+	+	+
Giuliano 2011	?	?	?	+	?	+	?
Holli 2001	+	+	+	+	+	?	?
Hughes 2013	+	+	+	+	?	+	?
Killander 2016	+	+	+	+	?	+	?
Kunkler 2015	+	+	+	?	?	+	+
Litière 2012	+	+	?	+	+	+	+
Louis-Sylvestre 2003	?	?	?	?	?	+	+
Martelli 2014	?	?	+	+	?	+	+
Newman 1998	?	?	?	?	?	?	?
Poggi 2003	?	?	+	+	?	+	?
Polgár 2013	+	+	+	+	+	+	+
PÖTTER 2007	?	?	+	+	?	?	?
Sarrazin 1989	+	+	?	?	+	+	+
Sato 2016	?	?	?	?	?	?	?
Sjostrom 2017	+	+	+	+	?	+	+
Strnad 2016	+	+	?	?	+	+	?
Tinterri 2013	+	+	+	+	?	+	+
van Dongen 2000	+	?	+	?	+	+	?
Veronesi 2001	+	?	+	+	?	+	+
Veronesi 2003	?	?	+	?	?	+	?
Veronesi 2005	+	+	?	?	+	+	?
Veronesi 2013	+	+	+	+	+	+	+
Voogd 1996	?	?	+	?	+	+	+
Wickberg 2014	+	+	?	+	?	+	+
Winzer 2004	+	+	?	?	+	+	+

B.



Supplementary Figure 2. Risk of bias. (A) For each trial. Green: low risk; yellow: moderate risk; red: high risk. (B) For the summary (based on the percentage of trials affected with each type of bias).



Supplementary Figure 3. Box plots among trials included for overall survival. A. Mean age at baseline (years); B. Mean Follow-up (years). The size of the squares is proportional to the percentage contribution of the column-defining direct comparison to the row-defining network estimate.

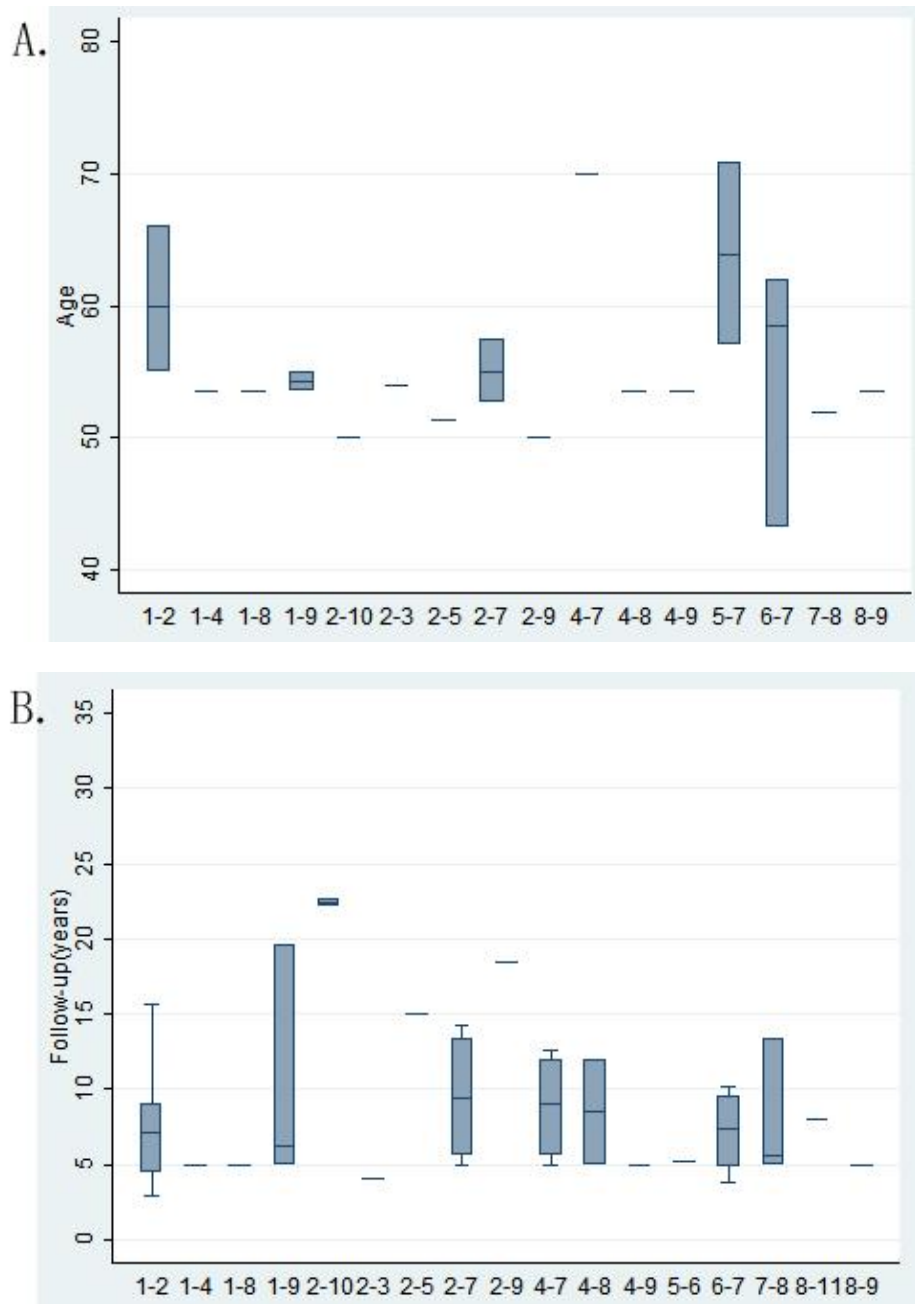
1=BCS+ALND, 2=BCS+ALND+RT, 3=BCS+ANS+RT, 4=BCS+SLNB,
 5=BCS+SLNB+ART+RT, 6=BCS+SLNB+IORT, 7=BCS+SLNB+RT, 8=M, 9=M+ALND,
 10=M+ALND+RT, 11=M+RT.

BCS+ALND=Breast-conserving surgery+Axillary lymph node dissection. BCS+ALND+RT=Breast-conserving surgery+Axillary lymph node dissection+Radiotherapy.

BCS+ANS+RT=Breast-conserving surgery+Axillary node sample+Radiotherapy.

BCS+SLNB=Breast-conserving surgery+Sentinel lymph node biopsy.

BCS+SLNB+ART+RT=Breast-conserving surgery+ Sentinel lymph node biopsy+Axillary radiotherapy +Radiotherapy. BCS+SLNB+IORT=Breast-conserving surgery+Sentinel lymph node biopsy+Intraoperative radiotherapy. BCS+SLNB+RT=Breast-conserving surgery+Sentinel lymph node biopsy+Radiotherapy. M=Mastectomy. M+ALND=Mastectomy+Axillary lymph node dissection. M+ALND+RT=Mastectomy+Axillary lymph node dissection+Radiotherapy. M+RT=Mastectomy+Radiotherapy.



Supplementary Figure 4. Box plots among trials included for DFS. A. Mean age at baseline (years); B. Mean Follow-up(years) (%). The size of the squares is proportional to the percentage contribution of the column-defining direct comparison to the row-defining network estimate.

1=BCS+ALND, 2=BCS+ALND+RT, 3=BCS+ANS+RT, 4=BCS+SLNB,
 5=BCS+SLNB+ART+RT, 6=BCS+SLNB+IORT, 7=BCS+SLNB+RT, 8=M, 9=M+ALND,
 10=M+ALND+RT, 11=M+RT.

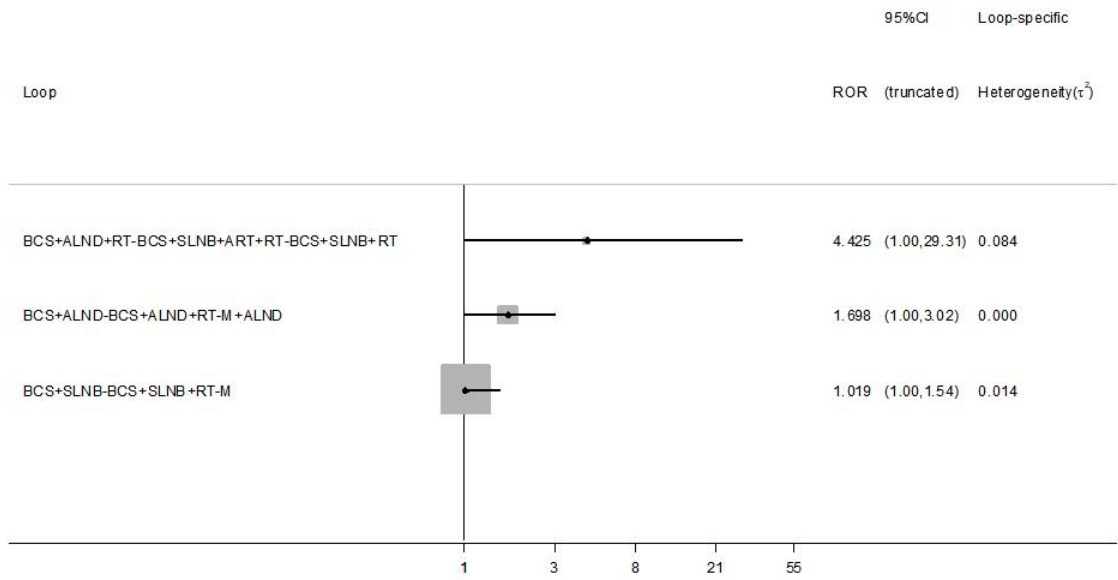
BCS+ALND=Breast-conserving surgery+Axillary lymph node dissection. BCS+ALND+RT=
 Breast-conserving surgery+Axillary lymph node dissection+Radiotherapy.

BCS+ANS+RT=Breast-conserving surgery+Axillary node sample+Radiotherapy.

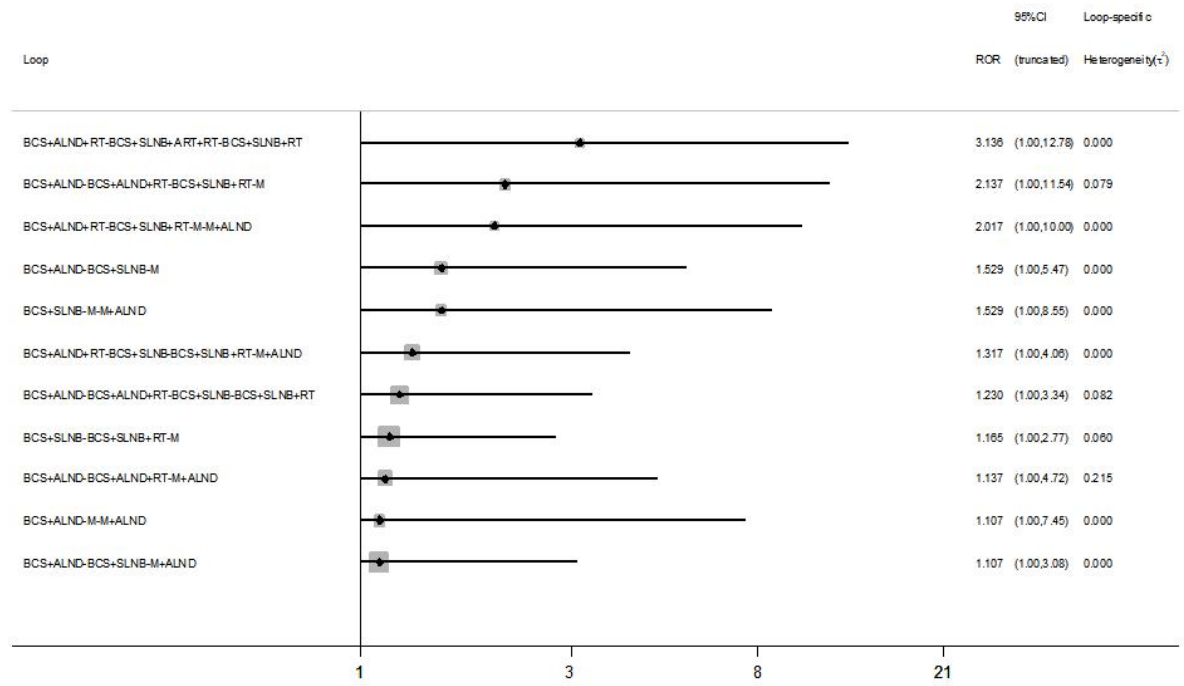
BCS+SLNB=Breast-conserving surgery+Sentinel lymph node biopsy.

BCS+SLNB+ART+RT=Breast-conserving surgery+ Sentinel lymph node biopsy+Axillary radiotherapy +Radiotherapy. BCS+SLNB+IORT=Breast-conserving surgery+Sentinel lymph node biopsy+Intraoperative radiotherapy. BCS+SLNB+RT=Breast-conserving surgery+Sentinel lymph node biopsy+Radiotherapy. M=Mastectomy. M+ALND=Mastectomy+Axillary lymph node dissection. M+ALND+RT=Mastectomy+Axillary lymph node dissection+Radiotherapy. M+RT=Mastectomy+Radiotherapy.

A. OS



B. DFS



Supplementary Figure 5. Evaluation of the local inconsistency for (A) overall survival (OS) and (B) disease-free survival (DFS). Forest plots of inconsistency check for all closed loops in network.

BCS+ALND=Breast-conserving surgery+Axillary lymph node dissection. BCS+ALND+RT=Breast-conserving surgery+Axillary lymph node dissection+Radiotherapy.

BCS+SLNB=Breast-conserving surgery+Sentinel lymph node biopsy.

BCS+SLNB+ART+RT=Breast-conserving surgery+ Sentinel lymph node biopsy+Axillary radiotherapy +Radiotherapy. BCS+SLNB+RT=Breast-conserving surgery+Sentinel lymph node biopsy+Radiotherapy. M=Mastectomy. M+ALND=Mastectomy+Axillary lymph node dissection.

A. OS

Treatment	SUCRA	PrBest	MeanRank
BCS+ALND	51.8	0.8	5.8
BCS+ALND+RT	34.7	0.0	7.5
BCS+ANS+RT	4.2	0.3	10.6
BCS+SLNB	77.4	17.9	3.3
BCS+SLNB+ART+RT	34.4	3.6	7.6
BCS+SLNB+IORT	46.7	7.2	6.3
BCS+SLNB+RT	56.5	0.7	5.4
M	56.7	2.3	5.3
M+ALND	80.9	42.6	2.9
M+ALND+RT	31.7	2.6	7.8
M+RT	75.0	22.0	3.5

B. DFS

Treatment	SUCRA	PrBest	MeanRank
BCS+ALND	72.6	10.3	3.7
BCS+ALND+RT	56.7	1.0	5.3
BCS+ANS+RT	39.0	8.5	7.1
BCS+SLNB	59.3	4.6	5.1
BCS+SLNB+ART+RT	29.6	2.8	8.0
BCS+SLNB+IORT	12.5	0.3	9.8
BCS+SLNB+RT	33.5	0.1	7.7
M	47.2	1.3	6.3
M+ALND	63.6	11.0	4.6
M+ALND+RT	58.6	13.7	5.1
M+RT	77.5	46.5	3.3

Supplementary Figure 6. Values of SUCRA in terms of (A) overall survival (OS) and (B) disease-free survival (DFS). Rankograms display the cumulative probabilities of ranking first to eleventh based on the findings of the network meta-analysis; these are utilized to calculate the so-called SUCRA values.

BCS+ALND=Breast-conserving surgery+Axillary lymph node dissection. BCS+ALND+RT=Breast-conserving surgery+Axillary lymph node dissection+Radiotherapy.

BCS+ANS+RT=Breast-conserving surgery+Axillary node sample+Radiotherapy.

BCS+SLNB=Breast-conserving surgery+Sentinel lymph node biopsy.

BCS+SLNB+ART+RT=Breast-conserving surgery+ Sentinel lymph node biopsy+Axillary radiotherapy +Radiotherapy. BCS+SLNB+IORT=Breast-conserving surgery+Sentinel lymph

node biopsy+Intraoperative radiotherapy. BCS+SLNB+RT=Breast-conserving surgery+Sentinel

lymph node biopsy+Radiotherapy. M=Mastectomy. M+ALND=Mastectomy+Axillary lymph node dissection. M+ALND+RT=Mastectomy+Axillary lymph node dissection+Radiotherapy.

M+RT=Mastectomy+Radiotherapy.