

Additional Information Table S1C. Study characteristics of articles included in the review investigating CXCR4 expression prevalences in breast cancer, *in situ* carcinoma, benign breast disease, and normal breast tissue.

Reference	Study population			Patient and tumor characteristics				Histology							IHC						
	First author Year, Country of patient inclusion	Inclusion period	No. of invasive cancers (+other tissue)	Important selection criteria	Age(range/ SD)	Tumor size*	Histological grade		LN ⁺ (%)	Normal	Benign	In situ	invasive	IDC	ILC	Other	TMA	Cores (mm)	Antibody (manufacturer)	Obs.	
						pT	0%	100%	0%	100%											
Huang, S.[92] 2012, China	2002-2007	197 (+20)	-		44(23-75)	1 2/3		I II III		56	○	●	○	○	●	○	○	○	12G5 (Abcam)	ns	
Jin, F.[93] 2012, Germany	1989-1993	140	-		ns	ns		ns		ns	○	○	○	●	○	○	○	na (na)	ns		
Ibrahim, T.[94] 2011, Italy,	1997-2000	40	-		66 ^a (42-87)	ns		I II III		ns	○	○	○	○	●	○	○	Ab58176 (Abcam)	2		
Sacanna, E.[95] 2011, Italy	1997-2000	40	-		66 ^a (42-87)	ns		I II III		ns	○	○	○	○	●	○	○	Ab58176 (Abcam)	2		
Bohn, O.L.[96] 2010, USA	ns	64	M-		ns	1 2 3		ns		41	○	○	○	○	●	●	●	●	3 0.6	Ab2074 (Abcam)	1
Kobayashi, T.[97] 2010, Japan	ns	223	-		52(30-82)	1/2 3		I ^b II III		45	○	○	○	○	●	●	●	●	2 2.0	MAB173 (R&D Systems)	2
Liu, Y.[98] 2010, China	1997-2004	200	-		51(37-74)	1 2 3		I II III		50	○	○	○	○	●	○	○	●	2 2.0	ns (Abcam)	2
Andre, F.[99] 2009, France	1989-1995	794	grade 2-3 or LN+		56 ^a (ns)	<3 cm ≥3 cm		I II III		43	○	○	○	●	○	○	○	●	3 ns	MAB172 (R&D systems)	2
Cabioglu, N.[100] 2009, USA	ns	29	M+		44(27-79)	ns		I II III		ns	○	○	○	○	●	●	●	○	MAB173 (R&D systems)	ns	
Hassan, S.[101] 2009, Canada	2000-2003	236	stage I-III		ns	1 2 3		I II III		46	○	○	○	●	○	○	○	●	2/3 ns	TN14003 (na)	ns
Kim, J.O.[102] 2009, South Korea	2000-2009	44	-		52 ^a (28-77)	1 2 3		I II III		41	○	○	○	○	●	○	○	●	ns 5.0	ns (Abcam)	ns
Liu, F.[103] 2009, China	2004-2007	199	Including micro- papillary carc.		53 ^a (29-83)	1 2 3		I II III		70	○	○	○	○	●	○	●	○	MAB172 (R&D systems)	ns	
Yasuoka, H.[104]	1981-1992	113	family history -		51(24-87)	1		I/II		52	○	○	○	○	●	○	●	○	ns (Abcam)	3	

2009, Japan					2/3		III															
Zhou, W.[105] 2009, China	2004-2006	63 (+20)	Stage ≤IIIA	53 ^a (32-80)	1 2 3		I/II III		46	●	○	○	○	●	○	●	○		MAB172 (R&D systems)	2		
Blot, E.[106] 2008, France	1991-1991	194	-	57 ^a (26-84)	1 2/3		I II/III		56	○	○	○	○	●	○	○	○		12G5 (R&D systems)	ns		
Fujii, T.[107] 2008, Japan	1993-1999	73	-	56 ^a (11)	1 2/3		I II III		46	○	○	○	○	●	○	○	○		ns (Prosci Inc.)	2		
Woo, S.[108] 2008, South Korea	1997-2002	105	M-	50(28-78)	1 2 3		I II III		52	○	○	○	○	●	○	○	○		MAB172 (R&D systems)	2		
Yasuoka, H.[109] 2008, Japan	1981-1992	113	family history -	51(24-87)	1 2/3		I/II III		52	○	○	○	○	○	●	○	●	○	ns (Abcam)	3		
Hao, L.[110] 2007, China	2002-2005	76 (+14)	-	50(ns)	1 2/3		I II III		54	●	●	○	○	●	○	○	○		MAB172 (R&D systems)	2*		
Tsoli, E.[111] 2007, UK	1999-2001	151	-	63(29-94)	ns		I II III		38	○	○	○	○	○	●	●	○	●	4	3.0	MAB171 (R&D systems)	ns
Andre, F.[112] 2006, France	1972-1979	133	LN+	50(29-64)		25 (10-90)	I/II III		100	○	○	○	○	●	○	○	○		MAB172 (R&D systems)	2		
Kim, R.[113] 2006, Japan	1980-2001	22	M+ (bone)	55(23-79)	ns		ns		69	○	○	○	○	○	●	○	○		ns (Abcam)	ns		
Salvucci, O.[114] 2006, Switzerland	1985-2001	1808 (+214)	-	62(26-101)	ns		I II III		48	●	●	●	○	○	●	●	●	●	ns	0.6	MAB172 (R&D systems)	2
Shim, H.[115] 2006, USA	ns	94 (+44)	-	ns	1/2 3		ns		21	●	○	○	○	○	○	○	○	●	ns	ns	TN14003 (na)	ns
Su, Y.C.[116] 2006, Taiwan	1998-2004	85	pT1-2, clinically LN-	44 ^a (ns)	1 2 3		I II III		31	○	○	○	○	○	○	○	○		MAB172 (R&D systems)	2		
Cabioglu, N.[117] 2005, Turkey	2000-2001	18	clinically LN-	45(38-76)	1 2/3		ns		67	○	○	○	○	○	○	○	○		MAB173 (R&D systems)	ns		
Cabioglu, N. 2[118] 2005, USA	ns	197	pT1	ns	1 2 3		ns		50	○	○	○	○	○	○	○	○		MAB173 (R&D systems)	ns		
Li, Y.M.[119] 2004, USA	ns	219	-	ns	ns		ns		ns	○	○	○	○	○	○	○		MAB170 (R&D systems)	2			
Schmid, B.C.[120] 2004, Austria	2000-2001	7 (+28)	pT1-2	ns	1/2 3		ns		ns	○	○	○	○	○	○	○		12G5 (R&D systems)	ns			
Kato, M.[121] 2003, Japan	1990-1996	59	-	53 ^a (9)	1 2 3		I II III		49	○	○	○	○	○	○	○		ns (BD Pharmingen)	2			

a: mean; *: mean size in mm (range or SD); b: nuclear grade; ns: not stated; na: not applicable; ○: tissue not investigated; ●: tissue investigated; ◎: both TMA and full sections investigated; IDC: invasive ductal carcinoma; ILC: invasive lobular carcinoma; IBC: inflammatory breast cancer; ABC: advanced breast cancer; TN: triple negative; LN: lymph node; TMA: tissue microarray PT: phyllodes tumors FA: fibroadenoma; M: distant metastasis, Obs.: number of observers evaluating staining result, +: positive; -: negative