

Supplementary Materials: Beyond Chemotherapies: Recent Strategies in Breast Cancer Treatment

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Table S1. Lists of genes analyzed in each Gene Expression Signature (GES).

OncotypeDX [1]	Mammaprint [2]	Prosigna PAM50 [3]	Endopredict [4]
<i>beta-actin</i>	AL080059	FOXC1	AZGP1
GAPDH	Contig 63649RC	MIA	IL6ST
GUS	MMP9	KNTC2	RBBP8
RPLPO	DC13	CEP55	DHCR7
TFRC	EXT1	ANLN	MGP
Ki67	AL137718	MELK	STC2
STK15	HEC	GPR160	BIRC5
Survivin	ECT2	TMEM45B	UBE2C
<i>cyclin B1</i>	GMPS	ESR1	CALM2
MYBL2	Contig 32185RC	FOXA1	OAZ1
GRB7	Contig 35251RC	ERBB2	RPL37A
HER2	GNAZ	GRB7	
ER	SERF1A	FGFR4	
PGR	OXCT	BLVRA	
BCL2	ORC6L	BAG1	
SCUBE2	L2DTL	CDC20	
MMP11	PRC1	CCNE1	
<i>Stromelysin 3</i>	AF052162	ACTR3B	
<i>Cathepsin L2</i>	Contig 55725RC	MYC	
GSTM1	CENPA	SFRP1	
CD68	SM20	KRT14	
BAG1	MCM6	KRT5	
	AKAP2	MLPH	
	Contig 56457RC	CCNB1	
	MP1	CDC6	
	Contig 40831RC	TYMS	
	Contig 51464RC	UBE2T	
	IGFBP5	RRM2	
	CCNE2	MMP11	
	ESM1	CXXC5	
	Contig 20217RC	ORC6L	
	LOC57110	MDM2	
	AP2B1	KIF2C	
	CFFM4	PGR	
	PECI	MKI67	
	TGFB3	BCL2	
	Contig 46223RC	EGFR	
	BBC3	PHGDH	
	CEGP1	CDH3	
	Contig 48328RC	NAT1	
	ALDH4 KIAA1442	SLC39A6	
	Contig 32125RC	MAPT	
	LOC51203	UBE2C	
	Contig 46218RC	PTTG1	
	Contig 38288RC	EXO1	
	AA555029RC	CENPF	
	FGF18	CDCA1	
	PK428	MYBL2	

OncotypeDX [1]	Mammaprint [2]	Prosigna PAM50 [3]	Endopredict [4]
	<i>UCH37</i>	<i>BIRC5</i>	
	<i>KIAA1067</i>		
	<i>COL4A2</i>		
	<i>KIAA0175</i>		
	<i>RAB6B</i>		
	<i>Contig 28552RC</i>		
	<i>WISP1</i>		
	<i>RFC4</i>		
	<i>DKFZP564D0462</i>		
	<i>DCK</i>		
	<i>SLC2A3</i>		
	<i>Contig 24252RC</i>		
	<i>FLJ11190</i>		
	<i>NMU</i>		
	<i>Contig 63102RC</i>		
	<i>PECI</i>		
	<i>IGFBP5</i>		
	<i>Contig 55377RC</i>		
	<i>HSA250839</i>		
	<i>GSTM3</i>		
	<i>FLT1</i>		

Table S2. Data from phase II studies about neratinib.

Author	Treatment	Number of Patients	Median PFS	CR %, (n) *	PR %, (n) *	Stable ≥ 24 Weeks *	Progression *
Blackwell et al. [5]	Neratinib + trastuzumab	28	15.9 weeks	7.1 (2)	21.4 (6)	7.1 (2)	21.4 (6)
Martin et al. [6]	Neratinib vs.	117 vs.	4.5 months vs.	1.7 (2)	27.3 (32)	15.4 (18)	17.1 (20)
	lapatinib + capecitabine	116	6.8 months (NS)				
Awada et al. [7]	Neratinib + paclitaxel vs.	242 vs.	12.9 months vs.	1.7 (4)	73.1 (117)	/	/
	trastuzumab + paclitaxel	237	12.9 months (NS)				
Chow et al. [8]	Neratinib + paclitaxel	99	57 weeks	7 (7)	66.7 (66)	9 (9)	6.1 (6)
Burstein et al. [9]	Neratinib	136	22.3 weeks **	0.8 (1)	36.8 (50)	10.3 (14)	16.2 (22)
			39.6 weeks ***				
Freedman et al. [10]	Neratinib	40	1.9 months	0	7.5 (3)	/	
Park et al. [11]	Neratinib (neoadjuvant)	211	/	/	/	/	/
Total neratinib		873		2.4% (16/662)	41.4% (274/662)	11.3% (43/380)	14.2% (54/380)

* neratinib group; ** with prior trastuzumab; *** without prior trastuzumab. PFS: progression free survival, CR: complete response, PR: partial response, NS: Not Significant. (n) = number of patients concerned.

Table S3. Atezolizumab in TNBC.

Author	Treatment	Number of Patients	Median PFS * (CI 95%)	Median OS * (CI 95%)	CR % (n)	PR % (n)	Progression	Median Follow-Up *
Schmid et al. [12]	Atezolizumab + nab-paclitaxel	451	7.2 (5.6–7.5)	21.6 (17.3–3.4)	7.1 (32)	48.8 (220)	15.3 (69)	12.9
	vs. Placebo + nab-paclitaxel	vs. 451	vs. 5.5 (5.3–5.6)	vs. 17.6 (15.0–20.0)				
Adams et al. [13]	Atezolizumab + nab-paclitaxel	33	5.5 (5.1–7.7)	14.7 (10.1–NE)	3 (1)	36.4 (12)	18.2 (6)	24.4
Emens et al. [14]	Atezolizumab	116	1.4 (1.3–1.6)	8.9 (7.0–12.6)	2.6 (3)	6.9 (8)	62.9 (73)	25.3

* Value in months. PFS: progression free survival, OS: overall survival, CR: complete response, PR: partial response, NE: Not Estimable, CI: confidence interval. (n) = number of patients concerned.

Table S4. Palbociclib in phase II and III studies.

Phase	Author	Treatment	Patients	Median PFS (95% CI) *	Median OS (95% CI) *	CR % (n)	PR % (n)	Progression % (n)	Stable Disease ≥24 Weeks	Median Follow-Up* (95% CI)
II	DeMichele et al. [15]	Palbociclib	33	3.8 (1.9–5.8)	/	0	6.1 (2)	39.4 (13)	/	UN
	Finn et al. (PALOMA-1) [16]	Palbociclib + letrozole vs.	84 vs.	20.2 (13.8–27.5) vs.	/	1.2 (1)	41.7 (35)	3.6 (3)	38.1 (32)	29.6 (27.9–36)

		letrozole	81	10.2 (5.7–12.6) (1)	/					
	Brufsky et al. [17]	Palbociclib + letrozole	126	4.5 (3.7–6.2)	21,1 (14,8–NE)	1,6 (2)	4 (5)	35.7 (45)	27.8 (35)	14,2
		Total	243			1.2 (3)	17.3 (42)	25.1 (61)	27.6 (67)	
III	Finn et al. (PALOMA-2) [18]	Palbociclib + letrozole vs. placebo + letrozole	444	24.8 (22.1–NE) vs. 14.5 (12.9–17.1)		/	/	/		23
	Cristofanilli et al. (PALOMA-3) [19]	palbociclib + fluevestrant vs. placebo + fluevestrant	347 vs. 174	9.5 (9.2–11) 4.6 (3.5–5.6)		0	19 (66)	17 (58)		8.9

* Value in months. PFS: progression free survival, OS: Overall survival, CR: complete response, PR: partial response, CI: confidence interval. (*n*) = number of patients concerned.

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