

Supplementary Table 1. Distribution of ER, PR, and HER2 Status Among Breast Cancer Patients, SEER-18 Excluding Alaska, 2010

Category	ER Status		PR Status		HER2 Status	
	Count	Column %	Count	Column %	Count	Column %
Positive	44 595	77.6%	37 826	65.8%	7643	13.3%
Negative	9714	16.9%	15 953	27.8%	43 242	75.2%
Borderline	62	0.1%	191	0.3%	1566	2.7%
Unknown	3112	5.4%	3513	6.1%	5032	8.8%
Total	57 483	100.0%	57 483	100.0%	57 483	100.0%

Supplementary Table 2. Classification of Breast Cancer Molecular Subtypes Based on Combination of HER2, ER, PR Status, SEER-18 Excluding Alaska, 2010

Subtype	HER2 Status	ER Status	PR Status	Frequency
HR+/HER2- N = 36 810	Negative	Positive	Positive	31 189
	Negative	Positive	Negative	4844
	Negative	Positive	Unknown	407
	Negative	Negative	Positive	354
	Negative	Unknown	Positive	16
Triple Negative N = 6193	Negative	Negative	Negative	6193
HR+/HER2+ N = 5240	Positive	Positive	Positive	3605
	Positive	Positive	Negative	1426
	Positive	Positive	Unknown	61
	Positive	Negative	Positive	144
	Positive	Unknown	Positive	4
HR-/HER2+ N = 2328	Positive	Negative	Negative	2328
Unknown N = 6912	Positive	Negative	Unknown	9
	Positive	Unknown	Negative	15
	Positive	Unknown	Unknown	51
	Negative	Negative	Unknown	30
	Negative	Unknown	Negative	33
	Negative	Unknown	Unknown	176
	Unknown	Positive	Positive	2472
	Unknown	Positive	Negative	501
	Unknown	Positive	Unknown	90
	Unknown	Negative	Positive	39
	Unknown	Negative	Negative	604
	Unknown	Negative	Unknown	13
	Unknown	Unknown	Positive	3
	Unknown	Unknown	Negative	9
Unknown	Unknown	Unknown	2867	

HER2 status: positive = positive; negative = negative; unknown = borderline + unknown codes (997, 998, 999)

ER status: positive = positive + borderline; negative = negative; unknown = unknown codes (997, 998, 999)

PR status: positive = positive + borderline; negative = negative; unknown = unknown codes (997, 998, 999)

Supplementary Table 3. Age-Specific Incidence Rates per 100,000 of Breast Cancer by Molecular Subtypes and Race/Ethnicity, SEER-18 Excluding Alaska, 2010

Subtype	Age	NH White		NH Black		NH API		Hispanic	
		Rate	95% CI	Rate	95% CI	Rate	95% CI	Rate	95% CI
HR+/ HER2-	20-24	0.5	(0.2, 1.0)	0.0	(0, 0.9)	0.7	(0.1, 2.5)	0.4	(0.1, 1.1)
	25-29	3.7	(2.8, 4.8)	4.1	(2.3, 6.7)	3.9	(2.1, 6.6)	2.9	(1.9, 4.4)
	30-34	12.6	(10.8, 14.6)	18.0	(13.9, 23.0)	12.7	(9.2, 17.0)	8.1	(6.2, 10.4)
	35-39	31.2	(28.3, 34.2)	27.5	(22.4, 33.5)	30.4	(25.0, 36.6)	20.4	(17.3, 24.0)
	40-44	78.9	(74.6, 83.4)	67.2	(59.1, 76.0)	76.2	(67.2, 86.1)	43.1	(38.2, 48.4)
	45-49	128.2	(123.1, 133.5)	86.1	(77.1, 95.8)	98.8	(88.3, 110.2)	80.3	(73.2, 87.9)
	50-54	146.0	(140.6, 151.5)	105.6	(95.3, 116.6)	119.7	(107.8, 132.5)	92.6	(84.3, 101.6)
	55-59	176.4	(170.2, 182.6)	146.1	(133.0, 160.2)	118.5	(106.0, 132.2)	111.8	(101.3, 123.2)
	60-64	245.5	(237.9, 253.3)	163.7	(148.0, 180.5)	176.5	(159.6, 194.7)	153.2	(138.9, 168.5)
	65-69	311.7	(301.7, 321.9)	234.0	(211.4, 258.3)	212.1	(189.9, 236.2)	191.7	(172.7, 212.2)
	70-74	332.3	(320.5, 344.5)	225.9	(200.4, 253.7)	181.8	(158.6, 207.4)	188.9	(167.2, 212.6)
	75-79	342.7	(329.6, 356.2)	236.8	(206.8, 270.0)	176.4	(150.8, 205.1)	190.3	(165.4, 217.9)
	80-84	314.4	(301.0, 328.2)	224.4	(190.3, 262.9)	160.2	(132.4, 192.1)	184.3	(155.7, 216.6)
85+	216.9	(206.6, 227.6)	162.5	(133.8, 195.5)	97.7	(75.3, 124.8)	131.3	(105.2, 162)	
Triple Negative	20-24	0.0	(0, 0.3)	0.2	(0, 1.4)	0.0	(0, 1.3)	0.1	(0, 0.7)
	25-29	1.8	(1.2, 2.7)	2.7	(1.3, 5.0)	0.3	(0, 1.7)	1.2	(0.5, 2.2)
	30-34	4.5	(3.5, 5.8)	6.9	(4.5, 10.2)	3.2	(1.6, 5.7)	4.5	(3.1, 6.3)
	35-39	9.7	(8.2, 11.5)	19.4	(15.2, 24.6)	6.6	(4.2, 9.8)	7.7	(5.8, 10.0)
	40-44	15.6	(13.7, 17.7)	24.8	(20.0, 30.4)	10.0	(6.9, 14.0)	13.4	(10.7, 16.5)
	45-49	19.5	(17.5, 21.6)	37.0	(31.2, 43.6)	15.0	(11.1, 19.8)	18.6	(15.2, 22.4)

	50-54	25.3	(23.1, 27.7)	51.6	(44.5, 59.4)	21.0	(16.2, 26.7)	24.3	(20.1, 29.2)
	55-59	29.0	(26.6, 31.6)	55.0	(47.0, 63.9)	17.6	(12.9, 23.3)	22.7	(18.1, 28.1)
	60-64	35.4	(32.6, 38.5)	68.9	(58.9, 80.2)	16.8	(11.9, 23.1)	24.3	(18.8, 30.9)
	65-69	36.8	(33.4, 40.4)	69.5	(57.5, 83.3)	23.6	(16.6, 32.6)	28.8	(21.7, 37.4)
	70-74	38.5	(34.6, 42.8)	65.2	(51.9, 81.0)	18.1	(11.3, 27.4)	33.1	(24.4, 43.9)
	75-79	35.2	(31.1, 39.7)	58.4	(44.0, 76)	18.8	(11.1, 29.7)	19.1	(11.8, 29.2)
	80-84	34.5	(30.2, 39.3)	51.3	(35.8, 71.4)	22.1	(12.6, 35.9)	28.8	(18.3, 43.3)
	85+	21.8	(18.6, 25.4)	34.8	(22.3, 51.8)	19.9	(10.6, 33.9)	21.1	(11.6, 35.5)
HR+/ HER2+	20-24	0.1	(0.0, 0.5)	0.0	(0, 0.9)	0.0	(0, 1.3)	0.0	(0, 0.5)
	25-29	1.8	(1.2, 2.6)	1.9	(0.8, 3.9)	1.8	(0.7, 3.9)	0.9	(0.4, 1.8)
	30-34	5.3	(4.2, 6.7)	5.5	(3.4, 8.6)	3.2	(1.6, 5.7)	2.3	(1.3, 3.6)
	35-39	10.6	(9.0, 12.5)	11.4	(8.2, 15.5)	6.8	(4.4, 10.1)	5.8	(4.2, 7.8)
	40-44	15.7	(13.8, 17.8)	17.3	(13.3, 22.0)	14.1	(10.4, 18.7)	9.3	(7.1, 11.9)
	45-49	22.0	(19.9, 24.3)	19.8	(15.6, 24.7)	22.6	(17.8, 28.4)	15.8	(12.7, 19.4)
	50-54	23.3	(21.2, 25.5)	18.2	(14.1, 23.1)	28.1	(22.5, 34.6)	17.3	(13.8, 21.5)
	55-59	25.1	(22.9, 27.6)	24.6	(19.4, 30.8)	24.9	(19.3, 31.5)	22.2	(17.6, 27.5)
	60-64	30.5	(27.9, 33.4)	32.4	(25.7, 40.4)	26.5	(20.3, 34.2)	17.8	(13.2, 23.5)
	65-69	33.2	(30.0, 36.7)	35.0	(26.7, 45.2)	21.1	(14.5, 29.6)	27.7	(20.8, 36.2)
	70-74	31.4	(27.8, 35.3)	31.8	(22.7, 43.3)	25.5	(17.3, 36.2)	26.9	(19.1, 36.7)
	75-79	28.8	(25.1, 33.0)	30.8	(20.6, 44.2)	18.8	(11.1, 29.7)	18.2	(11.1, 28.1)
	80-84	26.8	(23.0, 31.0)	33.7	(21.4, 50.6)	6.9	(2.2, 16.1)	12.5	(6.0, 23.1)
85+	22.0	(18.8, 25.6)	23.2	(13.3, 37.7)	13.7	(6.3, 26.1)	10.6	(4.2, 21.8)	
HR-/ HER2+	20-24	0.1	(0, 0.5)	0.0	(0, 0.9)	0.3	(0, 1.9)	0.0	(0, 0.5)
	25-29	0.5	(0.2, 0.8)	0.8	(0.2, 2.4)	0.0	(0, 1.1)	0.9	(0.4, 1.8)

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	30–34	1.4	(0.8, 2.1)	2.5	(1.1, 4.7)	2.0	(0.8, 4.2)	1.9	(1.0, 3.1)
	35–39	4.4	(3.4, 5.7)	4.4	(2.5, 7.2)	3.0	(1.5, 5.4)	2.8	(1.7, 4.3)
	40–44	4.9	(3.9, 6.1)	7.3	(4.8, 10.6)	5.3	(3.1, 8.4)	5.5	(3.8, 7.6)
	45–49	7.1	(5.9, 8.4)	13.1	(9.8, 17.2)	9.2	(6.2, 13.1)	6.9	(4.9, 9.4)
	50–54	10.6	(9.2, 12.1)	11.1	(8.0, 15.1)	18.1	(13.6, 23.5)	8.5	(6.1, 11.5)
	55–59	11.6	(10.0, 13.2)	16.2	(12.0, 21.3)	18.7	(13.9, 24.5)	13.0	(9.6, 17.2)
	60–64	14.2	(12.4, 16.2)	13.5	(9.3, 19.0)	17.7	(12.6, 24.1)	8.0	(5.0, 12.1)
	65–69	12.2	(10.3, 14.4)	16.0	(10.6, 23.3)	12.1	(7.3, 19.0)	9.2	(5.5, 14.6)
	70–74	13.2	(10.9, 15.8)	25.5	(17.4, 35.9)	9.0	(4.5, 16.2)	6.9	(3.3, 12.7)
	75–79	14.6	(12.0, 17.6)	20.2	(12.1, 31.5)	11.5	(5.7, 20.5)	14.6	(8.3, 23.7)
	80–84	8.9	(6.8, 11.5)	10.3	(4.1, 21.2)	11.0	(4.8, 21.8)	7.5	(2.8, 16.4)
	85+	9.2	(7.1, 11.6)	4.4	(0.9, 12.7)	3.1	(0.4, 11.0)	3.0	(0.4, 10.9)