

**S3 Table.** The baseline of 296 patients with stage I-III and at least 5-year follow-up

Characteristic	<i>AKT1</i> mutation		<i>PIK3CA</i> mutation		<i>PIK3CA/AKT1</i> mutation			
	MT (n=13)	p-value <sup>a)</sup>	2MTs (n=15)	1MT (n=117)	p-value <sup>b)</sup>	2MTs (n=18)	1MT (n=124)	p-value <sup>c)</sup>
<b>Age at diagnosis (yr)</b>								
≤ 50 (n=163)	6 (46.2)	0.509	6 (40)	59 (50.4)	0.154	7 (38.9)	63 (50.8)	0.099
> 50 (n=133)	7 (53.8)		9 (60)	58 (49.6)		11 (61.1)	61 (49.2)	
<b>Menopause at diagnosis</b>								
Yes (n=136)	7 (53.8)	0.559	8 (53.3)	57 (48.7)	0.569	10 (55.6)	60 (48.4)	0.458
No (n=160)	6 (46.2)		7 (46.7)	60 (51.3)		8 (44.4)	64 (51.6)	
<b>Tumor size (cm)</b>								
≤ 2 (n=96)	7 (53.8)	0.127	5 (33.3)	42 (35.9)	0.567	7 (38.9)	45 (36.3)	0.328
> 2 (n=200)	6 (46.2)		10 (66.7)	75 (64.1)		11 (61.1)	79 (63.7)	
<b>Lymph node metastasis</b>								
No (n=120)	7 (53.8)	0.390	3 (20)	48 (41.0)	0.247	5 (27.8)	51 (41.1)	0.522
Yes (n=176)	6 (46.2)		12 (80)	69 (59.0)		13 (72.2)	73 (58.9)	
<b>ER</b>								
Negative (n=86)	0	<b>0.013</b>	2 (13.3)	26 (22.2)	<b>0.023</b>	2 (11.1)	26 (21.0)	<b>0.002</b>
Positive (n=210)	13 (100)		13 (86.7)	91 (77.8)		16 (88.9)	98 (79.0)	
<b>PR</b>								
Negative (n=99)	0	<b>0.006</b>	5 (33.3)	33 (28.2)	0.305	5 (27.8)	33 (26.6)	0.064
Positive (n=197)	13 (100)		10 (66.7)	84 (71.8)		13 (72.2)	91 (73.4)	
<b>HER2</b>								
Negative (n=210)	13 (100)	<b>0.013</b>	14 (93.3)	88 (75.2)	<b>0.034</b>	17 (94.4)	95 (76.6)	<b>0.004</b>
Positive (n=86)	0		1 (6.7)	29 (24.8)		1 (5.6)	29 (23.4)	

<b>Ki67 (%)</b>								
< 14 (n=56)	8 (61.5)	<b>0.001</b>	5 (33.3)	25 (21.4)	<b>0.174</b>	8 (44.4)	27 (21.8)	<b>0.004</b>
≥ 14 (n=240)	5 (38.5)		10 (66.7)	92 (78.6)		10 (55.6)	97 (78.2)	
<b>Histological grade</b>								
I/II (n=98)	9 (69.2)	<b>0.029</b>	8 (53.3)	39 (33.3)	0.507	11 (61.1)	42 (33.9)	0.118
III (n=176)	4 (30.8)		6 (40)	69 (59.0)		6 (33.3)	73 (58.8)	
Unknown (n=22)	0		1 (6.7)	9 (7.7)		1 (5.6)	9 (7.3)	

Values are presented as number (%). <sup>a</sup>p-value for mutant (MT) and wild-type (WT) *AKT1*, <sup>b</sup>p-value for 2MTs, 1MT and WT of *PIK3CA*, <sup>c</sup>p-value for 2MTs, 1MT, and WT of *PIK3CA/AKT1*.