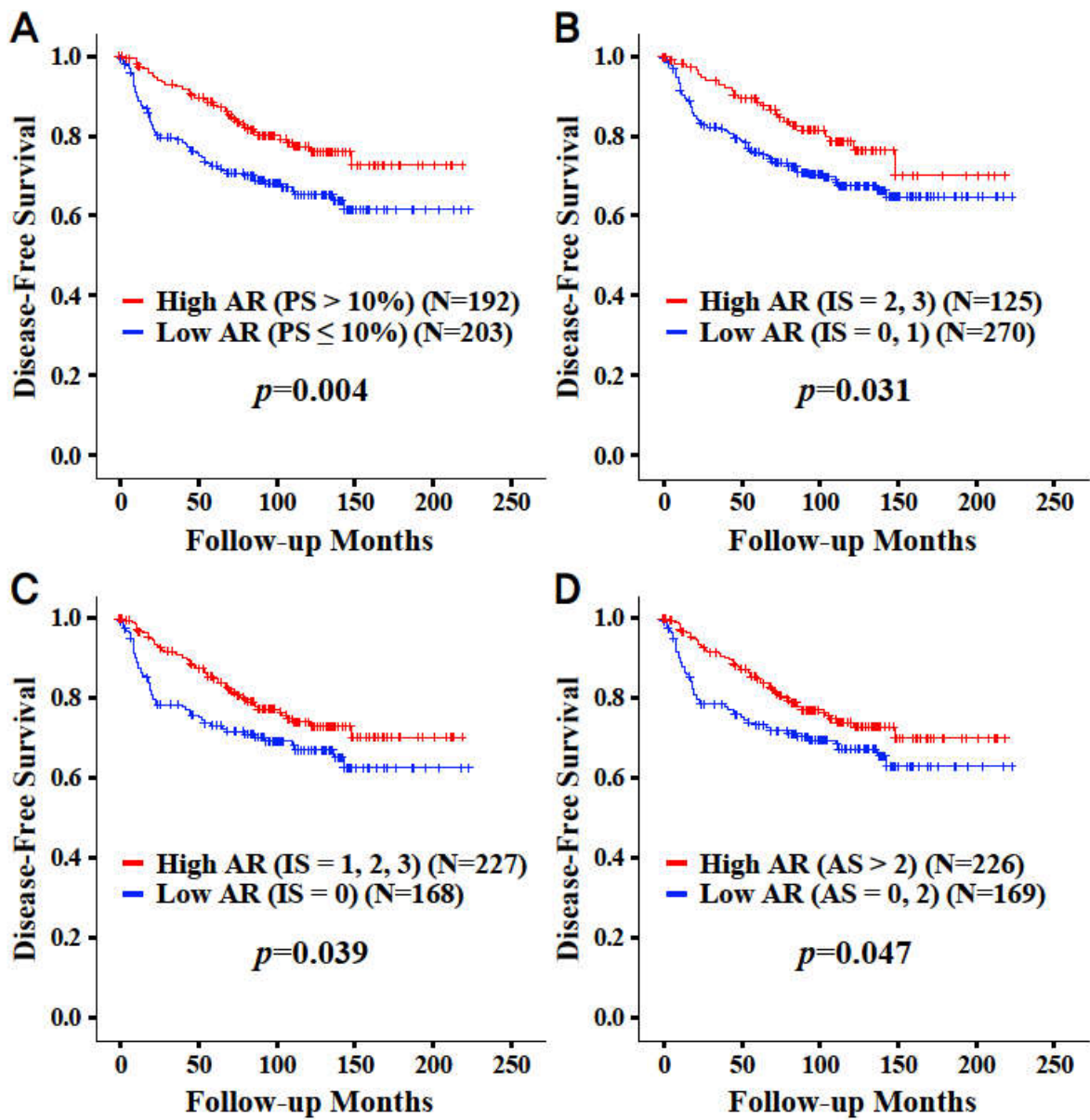
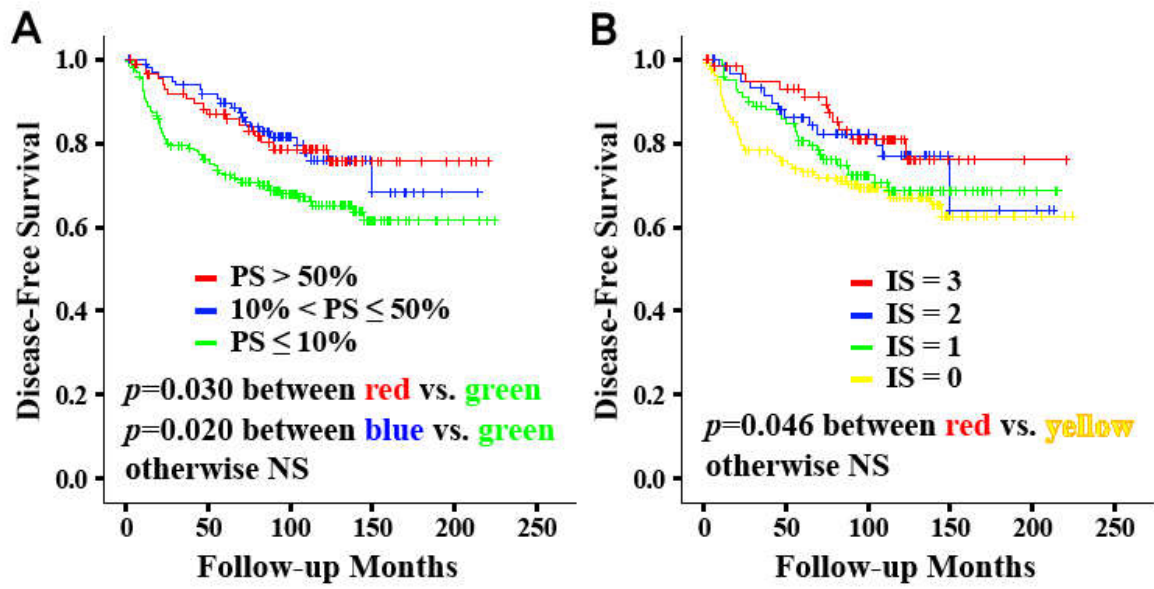


**Figure S1.** Immunohistochemical staining results of AR. Proportion score of less than 10% (A), and more than 10% (B). Intensity score of 0 (C), 1 (D), 2 (E), and 3 (F). Scale bar (bottom right), 50  $\mu$ m. Abbreviation: AR, androgen receptor.

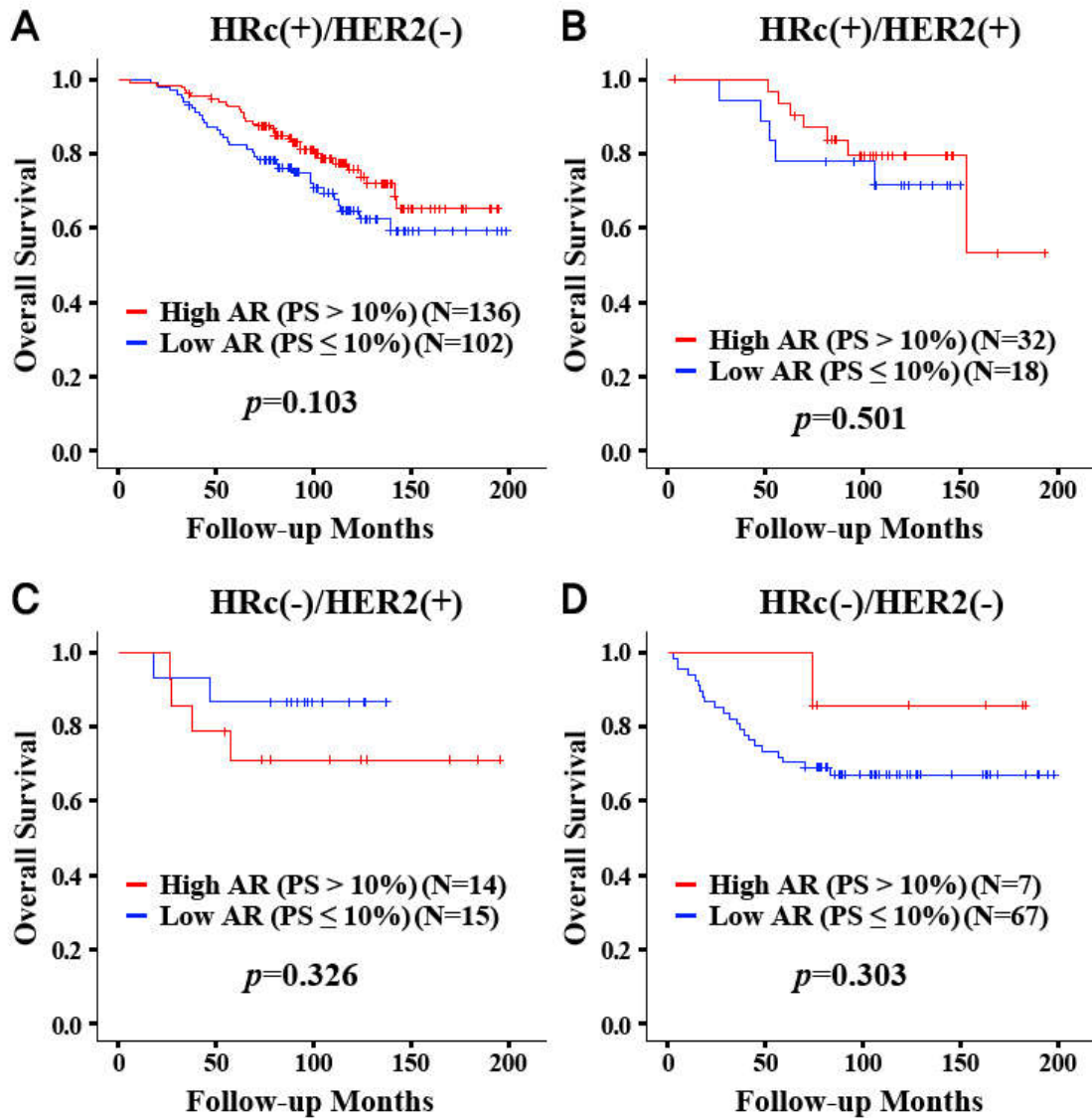


**Figure S2.** Disease-free survival curves according to expression level of AR by immunohistochemistry. Curves according to propensity score with the cut-off value of 10% (A), intensity score of 0, 1 vs. 2, 3 (B), intensity score of 0 vs. 1, 2, 3 (C), and Allred score of 0, 2 vs. more than 2 (D). Abbreviation: AR, androgen receptor; AS, Allred score, IS, intensity score; PS, proportion score.





**Figure S3.** Disease-free survival curves according to expression level of AR by immunohistochemistry. Curves according to proportion score (A) and intensity score (B). Abbreviation: AR, androgen receptor; IS, intensity score; NS, not significant; PS, proportion score.



**Figure S4.** Overall survival curves according to proportion score with the cut-off value of 10% by immunohistochemistry regarding AR. Curves in the subtype of HRc(+)/HER2(-) (A), HRc(+)/HER2(+) (B), HRc(-)/HER2(+) (C), and HRc(-)/HER2(-) (D), respectively. Abbreviation: AR, androgen receptor; HER2, human epidermal growth factor receptor 2; HRc, hormone receptor; PS, proportion score.

**Table S1.** Detailed overall survival rates and disease-free survival rates according to expression level of AR (proportion score with the cut-off value of 10%).

<b>Overall Survival</b>									
<b>Follow up time (year)</b>	<b>Low AR</b>			<b>High AR</b>			<b>Total</b>		
	<b>Subject No</b>	<b>Event No <sup>a)</sup></b>	<b>Rate</b>	<b>Subject No</b>	<b>Event No <sup>a)</sup></b>	<b>Rate</b>	<b>Subject No</b>	<b>Event No <sup>a)</sup></b>	<b>Rate</b>
5	203	36	82.20%	192	10	94.80%	395	46	88.30%
10	165	56	71.30%	178	35	80.30%	344	91	75.70%
15	97	63	63.90%	100	43	69.40%	198	106	66.60%
Last follow-up	19	63	63.90%	22	44	66.30%	42	107	65.00%
Last follow-up months	239 months			235 months			239 months		
<b>Disease-Free Survival</b>									
<b>Follow up time (year)</b>	<b>Low AR</b>			<b>High AR</b>			<b>Total</b>		
	<b>Subject No</b>	<b>Event No <sup>a)</sup></b>	<b>Rate</b>	<b>Subject No</b>	<b>Event No <sup>a)</sup></b>	<b>Rate</b>	<b>Subject No</b>	<b>Event No <sup>a)</sup></b>	<b>Rate</b>
5	203	53	72.50%	192	22	87.90%	395	75	80.00%
10	127	63	65.40%	145	38	76.10%	273	101	70.60%
15	53	65	61.70%	48	39	72.70%	102	104	67.00%
Last follow-up	6	65	61.70%	8	39	72.70%	15	104	67.00%
Last follow-up months	216 months			212 months			216 months		

Abbreviation: AR, androgen receptor. <sup>a)</sup> Cumulative number of events.