## Supplementary Table S8. HER2 status by dual-probe in situ hybridization based on the 2018 ASCO/CAP guidelines [3]

<table>
<thead>
<tr>
<th>HER2 ISH status</th>
<th>Definition</th>
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| ISH positive    | *HER2*/CEP17 ratio ≥2.0 and average *HER2* copy number ≥4.0 (ISH group 1)  
                  *HER2*/CEP17 ratio ≥2.0 and average *HER2* copy number <4.0 (ISH group 2) with concurrent IHC 3+  
                  *HER2*/CEP17 ratio <2.0 and average *HER2* copy number ≥6.0 (ISH group 3) with concurrent IHC 2+ or 3+  
                  *HER2*/CEP17 ratio <2.0 with average *HER2* copy number ≥4.0 and <6.0 (ISH group 4) with concurrent IHC 3+ |
| ISH negative    | *HER2*/CEP17 ratio <2.0 with average *HER2* copy number <4.0 (ISH group 5)  
                  *HER2*/CEP17 ratio ≥2.0 and average *HER2* copy number <4.0 (ISH group 2) with concurrent IHC 2+b  
                  *HER2*/CEP17 ratio <2.0 with average *HER2* copy number ≥4.0 and <6.0 (ISH group 4) with concurrent IHC 2+b  
                  ISH group 2, 3 and 4 with concurrent IHC 0 or 1+ |

*HER2*, human epidermal growth factor receptor type 2; *ASCO*, American Society of Clinical Oncology; *CAP*, College of American Pathologists; *ISH*, in situ hybridization; *CEP17*, centromere on chromosome 17; *IHC*, immunohistochemistry.

*a* An additional observer blinded to previous result recounts ISH. If the repeated ISH result is categorized to the same group, it is finally regarded as HER2 positive; 

*b* An additional observer blinded to previous result recounts ISH. If the repeated ISH result is designated to same ISH group, it is finally regarded as HER2 negative.

## References

