**Supplementary Table S3:** Agreement between three biomarker IHC-based and intrinsic subtypes: impact of adding tumor grade to distinguish between luminal A and luminal B cases.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **IHC subtype** | | **Intrinsic subtype** | | | | |  | | |
| **1% HR positivity threshold** |  | **IHC definition** | **Luminal A** | **Luminal B** | **HER2-enriched** | **Basal-like** | **Total** | **Sensitivity** | **Specificity** | **Accuracy** |
| **Luminal A** | ER+, PR>20%, HER2-, combined grade I or II | 106 (66) | 23 (27) | 2 (3) | 7 (5) | 138 | 66% | 89% | 81% |
| **Luminal B** | ER+, PR+, HER2+  *or*  ER+, HER2- and (PR≤20% or combined grade III) | 53 (33) | 60 (70) | 26 (37) | 6 (5) | 145 | 70% | 76% | 75% |
| **HER2-enriched** | ER-, HER2+ | 1 (1) | 0 (0) | 26 (37) | 6 (5) | 33 | 37% | 98% | 89% |
| **Basal-like** | ER-, PR-, HER2- | 0 (0) | 3 (3) | 16 (23) | 112 (86) | 131 | 86% | 94% | 91% |
| **Total** |  | 160 | 86 | 70 | 131 | 447 |  |  |  |
| **10% HR positivity threshold** |  | **IHC definition** | **Luminal A** | **Luminal B** | **HER2-enriched** | **Basal-like** | **Total** | **Sensitivity** | **Specificity** | **Accuracy** |
| **Luminal A** | ER+, PR>20%, HER2-, mitotic grade I or II | 110 (69) | 28 (33) | 4 (6) | 6 (5) | 148 | 69% | 87% | 80% |
| **Luminal B** | ER+, PR+, HER2+  *or*  ER+, HER2- and (PR≤20% or mitotic grade III) | 49 (31) | 55 (64) | 24 (34) | 7 (5) | 135 | 64% | 78% | 75% |
| **HER2-enriched** | ER-, HER2+ | 1 (1) | 0 (0) | 26 (37) | 6 (5) | 33 | 37% | 98% | 89% |
| **Basal-like** | ER-, PR-, HER2- | 0 (0) | 3 (3) | 16 (23) | 112 (86) | 131 | 86% | 94% | 91% |
| **Total** |  | 160 | 86 | 70 | 131 | 447 |  |  |  |

ER=estrogen receptor; PR=progesterone receptor