**Supplementary Table 1.** Summary of phase III clinical trials of targeted therapies in hormone-receptor-positive, human epidermal growth factor receptor 2-negative advanced breast cancer

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Line | Trial  | Description | *n* | Menopausal status | Median PFS; Hazard ratio (95% CI) | OS;Hazard ratio (95% CI) | ORR (%) |
| 1st | PALOMA-2MONALEESA-2MONALEESA-7MONARCH-3HORIZON | Palbociclib + letrozole*vs.* placebo + letrozoleRibociclib + letrozole*vs.* placebo + letrozoleRibociclib + OFS + tamoxifen/AI *vs.* placebo + OFS + tamoxifen/AIAbemaciclib + NASI*vs.* placebo + NASITemsirolimus + letrozole*vs.* placebo + letrozole | 6666686724931112 | PMPPMPPre-MPPMPPMP | 24.8 *vs.* 14.5 months;0.58 (0.46−0.72)25.3 vs. 16.0 months;0.57 (0.46−0.70)23.8 vs. 13.0 months;0.55 (0.44−0.69)28.2 *vs.* 14.8 months;0.54 (0.42−0.70)8.9 *vs.* 9.0 months;0.9 (0.76−1.07) | NRNRNR *vs.* 40.9 months;0.71 (0.54−0.95)NRNR | 55.0 *vs.* 39.054.5 *vs.* 38.841.0 *vs.* 30.061.0 *vs.* 45.527 *vs.* 27 |
| 2nd | PALOMA-3MONALEESA-3MONARCH-2BOLERO-2BELLE-2BELLE-3SANDPIPERSOLAR-1ACE | Palbociclib + fulvestrant ± OFS *vs.* placebo + fulvestrant ± OFSRibociclib + fulvestrant*vs.* placebo + fulvestrantAbemaciclib + fulvestrant ± OFS*vs.* placebo + fulvestrant ± OFSEverolimus + exemestrane*vs.* placebo + exemestraneBuparlisib + fulvestrant*vs.* placebo + fulvestrantBuparlisib + fulvestrant*vs.* placebo + fulvestrantTaselisib + fulvestrant*vs.* placebo + fulvestrantAlpelisib + fulvestrant*vs.* placebo + fulvestrantChidamide + exemestane*vs.* placebo + exemestane | 5217266697241147432516\*341\*365 | PMP + Pre-MPPMPPMP + Pre-MPPMPPMPPMPPMPPMPPMP | 9.5 *vs*. 4.6 months;0.46 (0.36−0.59)20.5 *vs*. 12.8 months;0.59 (0.48−0.73)16.4 *vs*. 9.3 months;0.55 (0.45−0.68)7.8 *vs*. 3.2 months;0.45 (0.38−0.54)6.9 *vs.* 5.0 months;0.78 (0.67−0.89)3.9 *vs.* 1.8 months;0.67 (0.54−0.84)7.4 *vs.* 5.4 months;0.70 (0.56−0.89)11.0 *vs.* 5.7 months;0.65 (0.50−0.85)7.4 *vs.* 3.8 months;0.75 (0.58−0.98) | 34.9 *vs.* 28.0 months;0.81 (0.64−1.03)NRNR31.0 *vs.* 26.6 months;0.89 (0.73−1.10)33.2 *vs.* 30.4 months;0.87 (0.74−1.02)NRNRNRNR | 24.6 *vs.* 10.940.9 *vs.* 28.748.1 *vs.* 21.312.6 *vs.* 1.711.8 *vs.* 7.78.0 *vs.* 2.028.0 *vs.* 11.935.7 *vs.* 16.218.4 *vs.* 9.1 |

\*Patients with PIK3CA mutated tumor. PFS: progression free survival; CI: confidence interval; OS: overall survival; ORR: objective response rate; PMP: post-menopausal; Pre-MP: pre-menopausal; NR: not reported; OFS: ovarian function suppression; NASI: nonsteroidal aromatase inhibitor.