

**Supplementary Table 1.** Dispositions of patients who received ribociclib plus fulvestrant or placebo plus fulvestrant as first-line therapy.

| n (%)   | Ribociclib +<br>Fulvestrant<br>n = 237 | Placebo +<br>Fulvestrant<br>n = 128 | All Patients<br>N = 365 |
|---|--|-------------------------------------|-------------------------|
| <b>Patients treated</b>                       |  |                                     |                         |
| Treatment ongoing <sup>a</sup>                | 39 (16.5)                              | 11 (8.6)                            | 50 (13.7)               |
| End of treatment                              | 198 (83.5)                             | 117 (91.4)                          | 315 (86.3)              |
| <b>Reason for end of treatment</b>            |  |                                     |                         |
| Progressive disease                           | 133 (56.1)                             | 101 (78.9)                          | 234 (64.1)              |
| Adverse event                                 | 23 (9.7)                               | 5 (3.9)                             | 28 (7.7)                |
| Patient/guardian decision                     | 22 (9.3)                               | 4 (3.1)                             | 26 (7.1)                |
| Physician decision                            | 19 (8.0)                               | 6 (4.7)                             | 25 (6.8)                |
| Death   | 1 (0.4)                                | 0                                   | 1 (0.3)                 |
| Protocol deviation                            | 0                                      | 1 (0.8)                             | 1 (0.3)                 |
| <b>Entered survival follow-up<sup>b</sup></b> | 167 (84.3)                             | 110 (94.0)                          | 277 (87.9)              |

<sup>a</sup> Patients continuing study treatment at the time of data cutoff (January 12, 2022). <sup>b</sup> The percentages of patients who entered survival follow-up used the number of patients with end of treatment as the denominator.

**Supplementary Table 2.** Adverse events of special interest among patients treated with ribociclib plus fulvestrant or placebo plus fulvestrant as first-line therapy (safety set).

| n (%)                            | Ribociclib + Fulvestrant<br>n = 237 |            |          | Placebo + Fulvestrant<br>n = 128 |         |         |
|----------------------------------|-------------------------------------|------------|----------|----------------------------------|---------|---------|
|                                  | All grades                          | Grade 3    | Grade 4  | All grades                       | Grade 3 | Grade 4 |
| <b>AESI grouping<sup>a</sup></b> |                                     |            |          |                                  |         |         |
| <b>Hematologic AESIs</b>         |                                     |            |          |                                  |         |         |
| Neutropenia                      | 175 (73.8)                          | 123 (51.9) | 20 (8.4) | 6 (4.7)                          | 2 (1.6) | 0       |
| Leukopenia                       | 77 (32.5)                           | 35 (14.8)  | 2 (0.8)  | 2 (1.6)                          | 0       | 0       |
| Anemia                           | 40 (16.9)                           | 6 (2.5)    | 0        | 12 (9.4)                         | 2 (1.6) | 0       |
| Thrombocytopenia                 | 16 (6.8)                            | 0          | 0        | 3 (2.3)                          | 0       | 0       |
| Other                            | 1 (0.4)                             | 1 (0.4)    | 0        | 0                                | 0       | 0       |
| <b>Nonhematologic AESIs</b>      |                                     |            |          |                                  |         |         |
| Infections                       | 146 (61.6)                          | 21 (8.9)   | 0        | 65 (50.8)                        | 6 (4.7) | 0       |
| Hepatobiliary toxicity           | 63 (26.6)                           | 26 (11.0)  | 6 (2.5)  | 22 (17.2)                        | 5 (3.9) | 0       |
| Renal toxicity                   | 30 (12.7)                           | 2 (0.8)    | 0        | 10 (7.8)                         | 0       | 0       |
| QT interval prolongation         | 25 (10.5)                           | 12 (5.1)   | 0        | 1 (0.8)                          | 1 (0.8) | 0       |
| ILD/ Pneumonitis                 | 8 (3.4)                             | 2 (0.8)    | 0        | 1 (0.8)                          | 0       | 0       |
| Reproductive toxicity            | 1 (0.4)                             | 0          | 0        | 1 (0.8)                          | 0       | 0       |

AESI, adverse event of special interest; ILD, interstitial lung disease.

<sup>a</sup> Patients with multiple events in a grouping are counted only once in the grouping under the maximum grade.