Supplemental Online Content

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This supplemental material has been provided by the authors to give readers additional information about their work.
eTable 1. List of 11 participating sites.

| Site name                                                                 | Number of recruited patients |
|---------------------------------------------------------------------------|-------------------------------|
| National Cancer Center/National Clinical Research Center for Cancer/Cancer Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College | 73                            |
| Hunan Cancer Hospital                                                     | 20                            |
| Yunnan Provincial Cancer Center                                           | 17                            |
| West China Second University Hospital                                    | 12                            |
| Cancer Hospital of China Medical University                               | 11                            |
| Chongqing University Cancer Hospital                                      | 8                             |
| The First Hospital of Jilin University                                    | 5                             |
| Xiangya Hospital                                                          | 2                             |
| Guangxi Medical University Affiliated Tumor Hospital                      | 2                             |
| The Second Affiliated Hospital of Dalian Medical University               | 1                             |
| Hubei Cancer Hospital                                                     | 1                             |
**eTable 2. Treatment-emergent adverse events**

| Events, No. (%) | Apatinib plus PLD group (n = 74) | PLD group (n = 72) |
|----------------|-----------------------------------|-------------------|
|                | All Grades | Grade 1-2 | Grade 3 | Grade 4 | All Grades | Grade 1-2 | Grade 3 | Grade 4 |
| Any            | 69 (93.2%) | 37 (50.0%) | 30 (40.5%) | 2 (2.7%) | 61 (84.7%) | 47 (65.3%) | 14 (19.4%) | 0 (0%) |
| WBC decrease   | 45 (60.8%) | 40 (54.1%) | 5 (6.8%) | 0 (0%) | 36 (50.0%) | 33 (45.8%) | 3 (4.2%) | 0 (0%) |
| Neutrophil count decrease | 44 (59.5%) | 33 (44.6%) | 11 (14.9%) | 0 (0%) | 27 (37.5%) | 21 (29.2%) | 6 (8.3%) | 0 (0%) |
| Oral ulcer     | 21 (28.4%) | 20 (27.0%) | 1 (1.4%) | 0 (0%) | 9 (12.5%) | 7 (9.7%) | 2 (2.8%) | 0 (0%) |
| Hand-foot syndrome | 19 (25.7%) | 15 (20.3%) | 3 (4.1%) | 1 (1.4%) | 2 (2.8%) | 0 (0%) | 2 (2.8%) | 0 (0%) |
| Anaemia        | 16 (21.6%) | 15 (20.3%) | 1 (1.4%) | 0 (0%) | 16 (22.2%) | 13 (18.1%) | 3 (4.2%) | 0 (0%) |
| Fatigue        | 15 (20.3%) | 15 (20.3%) | 0 (0%) | 0 (0%) | 8 (11.1%) | 8 (11.1%) | 0 (0%) | 0 (0%) |
| Nausea         | 14 (18.9%) | 13 (17.6%) | 1 (1.4%) | 0 (0%) | 19 (26.4%) | 19 (26.4%) | 0 (0%) | 0 (0%) |
| Hypertension   | 13 (17.6%) | 7 (9.5%) | 6 (8.1%) | 0 (0%) | 1 (1.4%) | 1 (1.4%) | 0 (0%) | 0 (0%) |
| Oral mucositis | 12 (16.2%) | 10 (13.5%) | 1 (1.4%) | 1 (1.4%) | 6 (8.3%) | 6 (8.3%) | 0 (0%) | 0 (0%) |
| Platelet count decrease | 12 (16.2%) | 10 (13.5%) | 2 (2.7%) | 0 (0%) | 3 (4.2%) | 3 (4.2%) | 0 (0%) | 0 (0%) |
| Vomiting       | 11 (14.9%) | 11 (14.9%) | 0 (0%) | 0 (0%) | 10 (13.9%) | 10 (13.9%) | 0 (0%) | 0 (0%) |
| AST increase   | 11 (14.9%) | 11 (14.9%) | 0 (0%) | 0 (0%) | 2 (2.8%) | 2 (2.8%) | 0 (0%) | 0 (0%) |
| Dizziness      | 11 (14.9%) | 10 (13.5%) | 1 (1.4%) | 0 (0%) | 2 (2.8%) | 2 (2.8%) | 0 (0%) | 0 (0%) |
| Headache       | 11 (14.9%) | 10 (13.5%) | 1 (1.4%) | 0 (0%) | 3 (4.2%) | 3 (4.2%) | 0 (0%) | 0 (0%) |
| Proteinuria    | 11 (14.9%) | 9 (12.2%) | 2 (2.7%) | 0 (0%) | 2 (2.8%) | 2 (2.8%) | 0 (0%) | 0 (0%) |
| Urine leucocyte positive | 8 (10.8%) | 8 (10.8%) | 0 (0%) | 0 (0%) | 2 (2.8%) | 2 (2.8%) | 0 (0%) | 0 (0%) |

AST, aspartate aminotransferase; PLD, pegylated liposomal doxorubicin; WBC, white blood cell count. Treatment-emergent adverse events occurring in 10% or more of patients in either group are listed.
eFigure. Subgroup Analyses of Progression-Free Survival.

| Groups                          | Apatinib+PLD (n=73) | PLD (n=74) | Apatinib+PLD | PLD | HR (95% CI) |
|---------------------------------|---------------------|------------|--------------|-----|-------------|
| Age                             | Event/N             | Event/N    | Median PFS   |     | 95% CI      |
| >65                             | 30/67               | 46/68      | 5.8 (3.7, 8.8) | 3.4 (2.5, 3.8) | 0.48 (0.29, 0.82) |
| ≤65                             | 7/11                | 4/6        | 8.8 (2.2, 12.7) | 2.1 (0.9, NA)   | 0.11 (0.01, 1.13) |
| ECOG performance status         |                     |            |              |     |             |
| 0                               | 10/17               | 12/24      | 5.7 (3.2, 9.9) | 6.6 (3.4, NA)   | 0.87 (0.30, 2.50) |
| 1-2                             | 27/59               | 35/46      | 5.6 (3.7, 8.9) | 2.6 (2.0, 3.7) | 0.28 (0.16, 0.50) |
| Previous platinum-sensitive relapse |                |            |              |     |             |
| No                              | 25/49               | 35/43      | 6.0 (3.7, 8.8) | 2.6 (2.0, 3.4) | 0.35 (0.19, 0.82) |
| Yes                             | 12/29               | 15/31      | 4.0 (3.5, 12.7) | 4.6 (2.0, 8.1) | 0.76 (0.34, 1.70) |
| Previous therapy lines          |                     |            |              |     |             |
| 1                               | 24/44               | 27/38      | 6.0 (3.7, 8.9) | 2.9 (2.0, 3.9) | 0.40 (0.21, 0.75) |
| 2                               | 5/18                | 16/26      | 5.8 (2.2, 7.3) | 3.4 (2.0, 5.9) | 0.37 (0.10, 1.41) |
| ≥3                              | 8/16                | 7/10       | 4.0 (2.9, NA)  | 2.9 (0.6, 3.3) | 0.69 (0.21, 2.24) |
| Platinum-free interval (months) |                     |            |              |     |             |
| >3                              | 22/44               | 27/45      | 4.0 (3.5, 5.8) | 3.7 (2.0, 5.6) | 0.74 (0.41, 1.33) |
| ≤3                              | 15/34               | 23/29      | 8.6 (3.7, 11.8) | 2.5 (2.0, 3.7) | 0.20 (0.09, 0.44) |
| Ascites                         |                     |            |              |     |             |
| No                              | 20/46               | 26/46      | 7.8 (4.6, 9.9) | 3.7 (2.0, 6.5) | 0.33 (0.16, 0.67) |
| Yes                             | 17/30               | 24/28      | 3.7 (2.9, 8.9) | 3.3 (2.0, 3.7) | 0.51 (0.25, 1.00) |
| Platinum-refractory             |                     |            |              |     |             |
| No                              | 31/63               | 41/60      | 5.7 (3.7, 8.8) | 3.4 (2.1, 3.9) | 0.51 (0.31, 0.87) |
| Yes                             | 6/15                | 9/14       | 7.3 (3.7, 12.7) | 3.0 (1.7, 3.7) | 0.16 (0.04, 0.61) |
| First platinum-resistant relapse |                     |            |              |     |             |
| No                              | 8/17                | 14/18      | 5.8 (3.6, NA)  | 2.9 (1.7, 3.7) | 0.37 (0.13, 1.05) |
| Yes                             | 20/61               | 36/66      | 5.7 (3.7, 8.8) | 3.4 (2.1, 4.6) | 0.48 (0.27, 0.83) |
| Overall                         | 37/78               | 55/74      | 5.8 (3.8, 8.8) | 3.3 (2.1, 3.8) | 0.44 (0.26, 0.71) |

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