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| **Supplementary Table 1. The data available status for subgroup-analyses among the included trials.** | | | | | | | | | | | | | |
| Study |  | DFS | | | | | | | OS | Adverse events | | | |
| Regimens | Treatment duration | EGFR mutation | Pathological stage | Age | Sex | Smoking status | Histology | Any grade | ≥3 grade | Dose reduction | Discontinuation |
| Zhong, 2018 | Y | Y | Y | Y | N | Y | Y | Y | Y | Y | Y | Y | Y |
| Kelly, 2015 | Y | Y | N | Y | N | N | N | N | Y | Y | Y | Y | Y |
| Yue, 2018 | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Glenwood, 2013 | Y | Y | N | Y | N | N | N | N | Y | N | Y | Y | Y |
| Feng, 2015 | Y | Y | N | Y | N | N | N | N | N | N | N | N | N |
| Li, 2014 | Y | Y | Y | Y | Y | Y | Y | N | Y | Y | Y | N | N |
| Herbst, 2020 | Y | Y | Y | Y | Y | Y | Y | N | Y | Y | Y | Y | Y |
| Study enrolled (n) | 7 | 7 | 4 | 7 | 3 | 4 | 4 | 2 | 6 | 5 | 6 | 5 | 5 |

Abbreviations: Y, data available; N, data not available; DFS, diseases free survival.

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| **Supplementary Table 2. Sensitivity analysis after removing the trial using the third-generation EGFR TKI.** | | | | | | | | |
| Outcome | Subgroup | No.of studies | Hazards ratio | 95% CI | Effect size Z | *P*-value | Heterogeneity  P-value | I2 |
| DFS | Random-effects model  Fixed-effects model | 6  6 | 0.50  0.53 | 0.34 to 0.73  0.41 to 0.67 | 3.56  5.15 | 0.0004  <0.00001 | 0.10  0.10 | 46%  46% |
| First-generation TKI | Random-effects model  Fixed-effects model | 4  4 | 0.55  0.56 | 0.34 to 0.88  0.43 to 0.72 | 2.48  4.41 | 0.01  <0.0001 | 0.06  0.06 | 60%  60% |
| TKI combined with CT | Random-effects model  Fixed-effects model | 2  2 | 0.34  0.34 | 0.16 to 0.70  0.16 to 0.70 | 2.94  2.94 | 0.003  0.003 | 0.66  0.66 | 0%  0% |
| Treatment duration≥20m | Random-effects model  Fixed-effects model | 2  2 | 0.42  0.50 | 0.19 to 0.93  0.36 to 0.69 | 2.15  4.21 | 0.03  <0.0001 | 0.04  0.04 | 76%  76% |
| Treatment duration<20m | Random-effects model  Fixed-effects model | 4  4 | 0.55  0.56 | 0.31 to 0.98  0.38 to 0.82 | 2.02  2.99 | 0.04  0.003 | 0.18  0.18 | 38%  38% |
| Exon19 deletion | Random-effects model  Fixed-effects model | 3  3 | 0.27  0.42 | 0.08 to 0.88  0.27 to 0.66 | 2.18  3.80 | 0.03  0.0001 | 0.04  0.04 | 68%  68% |
| Exon21 L858R | Random-effects model  Fixed-effects model | 3  3 | 0.53  0.53 | 0.35 to 0.81  0.35 to 0.81 | 2.97  2.97 | 0.003  0.003 | 0.61  0.61 | 0%  0% |
| Pathological stage II-III | Random-effects model  Fixed-effects model | 3  3 | 0.42  0.48 | 0.25 to 0.72  0.36 to 0.65 | 3.19  4.77 | 0.001  <0.0001 | 0.10  0.10 | 57%  57% |
| Pathological stage I-III (stage I >70%) | Random-effects model  Fixed-effects model | 3  3 | 0.65  0.62 | 0.28 to 1.47  0.41 to 0.96 | 1.04  2.17 | 0.30  0.03 | 0.16  0.16 | 45%  45% |
| OS | Random-effects model  Fixed-effects model | 5  5 | 0.72  0.84 | 0.37 to 1.41  0.61 to 1.14 | 0.96  1.14 | 0.34  0.25 | 0.02  0.02 | 66%  66% |

Abbreviations: DFS, diseases free survival; TKI, tyrosine kinase inhibitor; CT, chemotherapy; CI, confidence interval; OS, overall survival.

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| **Supplementary Table 3. Sensitivity analysis after removing the trials unselecting EGFR mutation status.** | | | | | | | | |
| Outcome | Subgroup | No.of studies | Hazards ratio | 95% CI | Effect size Z | *P*-value | Heterogeneity P-value | I2 |
| DFS | Random-effects model  Fixed-effects model | 5  5 | 0.32  0.31 | 0.18 to 0.57  0.25 to 0.38 | 3.83  11.15 | 0.0001  <0.0001 | 0.0002  0.0002 | 81%  81% |
| First-generation TKI | Random-effects model  Fixed-effects model | 2  2 | 0.42  0.50 | 0.19 to 0.93  0.36 to 0.69 | 2.15  4.21 | 0.03  <0.0001 | 0.04  0.04 | 76%  76% |
| Third-generation TKI | Random-effects model  Fixed-effects model | 1  1 | 0.20  0.20 | 0.15 to 0.27  0.1 to 0.27 | 10.73  10.73 | <0.0001  <0.0001 | NA  NA | NA  NA |
| TKI combined with CT | Random-effects model  Fixed-effects model | 2  2 | 0.34  0.34 | 0.16 to 0.70  0.16 to 0.70 | 2.94  2.94 | 0.003  0.003 | 0.66  0.66 | 0%  0% |
| Treatment duration≥20m | Random-effects model  Fixed-effects model | 3  3 | 0.32  0.30 | 0.15 to 0.70  0.24 to 0.38 | 2.88  10.76 | 0.004  <0.0001 | <0.0001  <0.0001 | 91%  91% |
| Treatment duration＜20m | Random-effects model  Fixed-effects model | 2  2 | 0.34  0.34 | 0.16 to 0.70  0.16 to 0.70 | 2.91  2.94 | 0.003  0.003 | 0.66  0.66 | 0%  0% |
| Pathological stage II-III | Random-effects model  Fixed-effects model | 4  4 | 0.32  0.34 | 0.16 to 0.63  0.27 to 0.44 | 3.27  8.53 | 0.001  <0.0001 | 0.0002  0.0002 | 85%  85% |
| Pathological stage I-III (stage I >70%) | Random-effects model  Fixed-effects model | 2  2 | 0.36  0.36 | 0.19 to 0.68  0.19 to 0.68 | 3.11  3.11 | 0.002  0.002 | 0.61  0.61 | 0%  0% |
| OS | Random-effects model  Fixed-effects model | 4  4 | 0.45  0.66 | 0.21 to 0.94  0.48 to 0.92 | 2.11  2.49 | 0.03  0.01 | 0.02  0.02 | 70%  70% |

Abbreviations: DFS, diseases free survival; TKI, tyrosine kinase inhibitor; CT, chemotherapy; CI, confidence interval; OS, overall survival

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| **Supplementary Table 4. Sensitivity analysis using both fixed-effects and random-effects models.** | | | | | | | | |
| Outcome | Subgroup | No.of studies | Hazards ratio | 95% CI | Effect size Z | *P*-value | Heterogeneity P-value | I2 |
| DFS | Random-effects model  Fixed-effects model | 7  7 | 0.41  0.35 | 0.24 to 0.70  0.29 to 0.43 | 3.30  10.83 | 0.001  <0.00001 | <0.0001  <0.0001 | 82%  82% |
| First-generation TKI | Random-effects model  Fixed-effects model | 4  4 | 0.55  0.56 | 0.34 to 0.88  0.43 to 0.72 | 2.48  4.41 | 0.01  <0.0001 | 0.06  0.06 | 60%  60% |
| Third-generation TKI | Random-effects model  Fixed-effects model | 1  1 | 0.20  0.20 | 0.15 to 0.27  0.15 to 0.27 | 10.73  10.73 | <0.00001  <0.00001 | NA  NA | NA  NA |
| TKI combined with CT | Random-effects model  Fixed-effects model | 2  2 | 0.34  0.34 | 0.16 to 0.70  0.16 to 0.70 | 2.94  2.94 | 0.003  0.003 | 0.66  0.66 | 0%  0% |
| Treatment duration≥20m | Random-effects model  Fixed-effects model | 3  3 | 0.32  0.30 | 0.15 to 0.70  0.24 to 0.38 | 2.88  10.76 | 0.004  <0.0001 | <0.0001  <0.0001 | 91%  91% |
| Treatment duration＜20m | Random-effects model  Fixed-effects model | 4  4 | 0.55  0.56 | 0.31 to 0.98  0.38 to 0.82 | 2.02  2.99 | 0.04  0.003 | 0.18  0.18 | 38%  38% |
| Exon19 deletion | Random-effects model  Fixed-effects model | 4  4 | 0.20  0.25 | 0.07 to 0.57  0.17 to 0.35 | 3.00  8.04 | 0.003  <0.00001 | 0.0003  0.0003 | 84%  84% |
| Exon21 L858R | Random-effects model  Fixed-effects model | 4  4 | 0.43  0.43 | 0.29 to 0.61  0.31 to 0.59 | 4.57  5.21 | <0.00001  <0.00001 | 0.31  0.31 | 17%  17% |
| Pathological stage II-III | Random-effects model  Fixed-effects model | 4  4 | 0.32  0.34 | 0.16 to 0.63  0.27 to 0.44 | 3.27  8.53 | 0.001  <0.00001 | 0.00002  0.00002 | 85%  85% |
| Pathological stage I-III  (stage I >70%) | Random-effects model  Fixed-effects model | 4  4 | 0.55  0.55 | 0.32 to 0.95  0.38 to 0.80 | 2.14  3.17 | 0.03  0.002 | 0.18  0.18 | 38%  38% |
| OS | Random-effects model  Fixed-effects model | 6  6 | 0.65  0.76 | 0.36 to 1.17  0.57 to 1.01 | 1.45  1.87 | 0.15  0.06 | 0.01  0.01 | 66%  66% |

Abbreviations: DFS, diseases free survival; TKI, tyrosine kinase inhibitor; CT, chemotherapy; CI, confidence interval; OS, overall survival.