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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 modelFixed-effects model | 66 | 0.500.53 | 0.34 to 0.730.41 to 0.67 | 3.565.15 | 0.0004<0.00001 | 0.100.10 | 46%46% |
| First-generation TKI | Random-effects modelFixed-effects model | 44 | 0.550.56 | 0.34 to 0.880.43 to 0.72 | 2.484.41 | 0.01<0.0001 | 0.060.06 | 60%60% |
| TKI combined with CT | Random-effects modelFixed-effects model | 22 | 0.340.34 | 0.16 to 0.700.16 to 0.70 | 2.942.94 | 0.0030.003 | 0.660.66 | 0%0% |
| Treatment duration≥20m | Random-effects modelFixed-effects model | 22 | 0.420.50 | 0.19 to 0.930.36 to 0.69 | 2.154.21 | 0.03<0.0001 | 0.040.04 | 76%76% |
| Treatment duration<20m | Random-effects modelFixed-effects model | 44 | 0.550.56 | 0.31 to 0.980.38 to 0.82 | 2.022.99 | 0.040.003 | 0.180.18 | 38%38% |
| Exon19 deletion | Random-effects modelFixed-effects model | 33 | 0.270.42 | 0.08 to 0.880.27 to 0.66 | 2.183.80 | 0.030.0001 | 0.040.04 | 68%68% |
| Exon21 L858R | Random-effects modelFixed-effects model | 33 | 0.530.53 | 0.35 to 0.810.35 to 0.81 | 2.972.97 | 0.0030.003 | 0.610.61 | 0%0% |
| Pathological stage II-III | Random-effects modelFixed-effects model | 33 | 0.420.48 | 0.25 to 0.720.36 to 0.65 | 3.194.77 | 0.001<0.0001 | 0.100.10 | 57%57% |
| Pathological stage I-III (stage I >70%) | Random-effects modelFixed-effects model | 33 | 0.650.62 | 0.28 to 1.470.41 to 0.96 | 1.042.17 | 0.300.03 | 0.160.16 | 45%45% |
| OS | Random-effects modelFixed-effects model | 55 | 0.720.84 | 0.37 to 1.410.61 to 1.14 | 0.961.14 | 0.340.25 | 0.020.02 | 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 modelFixed-effects model | 55 | 0.320.31 | 0.18 to 0.570.25 to 0.38 | 3.8311.15 | 0.0001<0.0001 | 0.00020.0002 | 81%81% |
| First-generation TKI | Random-effects modelFixed-effects model | 22 | 0.420.50 | 0.19 to 0.930.36 to 0.69 | 2.154.21 | 0.03<0.0001 | 0.040.04 | 76%76% |
| Third-generation TKI | Random-effects modelFixed-effects model | 11 | 0.200.20 | 0.15 to 0.270.1 to 0.27 | 10.7310.73 | <0.0001<0.0001 | NANA | NANA |
| TKI combined with CT | Random-effects modelFixed-effects model | 22 | 0.340.34 | 0.16 to 0.700.16 to 0.70 | 2.942.94 | 0.0030.003 | 0.660.66 | 0%0% |
| Treatment duration≥20m | Random-effects modelFixed-effects model | 33 | 0.320.30 | 0.15 to 0.700.24 to 0.38 | 2.8810.76 | 0.004<0.0001 | <0.0001<0.0001 | 91%91% |
| Treatment duration＜20m | Random-effects modelFixed-effects model | 22 | 0.340.34 | 0.16 to 0.700.16 to 0.70 | 2.912.94 | 0.0030.003 | 0.660.66 | 0%0% |
| Pathological stage II-III | Random-effects modelFixed-effects model | 44 | 0.320.34 | 0.16 to 0.630.27 to 0.44 | 3.278.53 | 0.001<0.0001 | 0.00020.0002 | 85%85% |
| Pathological stage I-III (stage I >70%) | Random-effects modelFixed-effects model | 22 | 0.360.36 | 0.19 to 0.680.19 to 0.68 | 3.113.11 | 0.0020.002 | 0.610.61 | 0%0% |
| OS | Random-effects modelFixed-effects model | 44 | 0.450.66 | 0.21 to 0.940.48 to 0.92 | 2.112.49 | 0.030.01 | 0.020.02 | 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 modelFixed-effects model | 77 | 0.410.35 | 0.24 to 0.700.29 to 0.43 | 3.3010.83 | 0.001<0.00001 | <0.0001<0.0001 | 82%82% |
| First-generation TKI | Random-effects modelFixed-effects model | 44 | 0.550.56 | 0.34 to 0.880.43 to 0.72 | 2.484.41 | 0.01<0.0001 | 0.060.06 | 60%60% |
| Third-generation TKI | Random-effects modelFixed-effects model | 11 | 0.200.20 | 0.15 to 0.270.15 to 0.27 | 10.7310.73 | <0.00001<0.00001 | NANA | NANA |
| TKI combined with CT | Random-effects modelFixed-effects model | 22 | 0.340.34 | 0.16 to 0.700.16 to 0.70 | 2.942.94 | 0.0030.003 | 0.660.66 | 0%0% |
| Treatment duration≥20m | Random-effects modelFixed-effects model | 33 | 0.320.30 | 0.15 to 0.700.24 to 0.38 | 2.8810.76 | 0.004<0.0001 | <0.0001<0.0001 | 91%91% |
| Treatment duration＜20m | Random-effects modelFixed-effects model | 44 | 0.550.56 | 0.31 to 0.980.38 to 0.82 | 2.022.99 | 0.040.003 | 0.180.18 | 38%38% |
| Exon19 deletion | Random-effects modelFixed-effects model | 44 | 0.200.25 | 0.07 to 0.570.17 to 0.35 | 3.008.04 | 0.003<0.00001 | 0.00030.0003 | 84%84% |
| Exon21 L858R | Random-effects modelFixed-effects model | 44 | 0.430.43 | 0.29 to 0.610.31 to 0.59 | 4.575.21 | <0.00001<0.00001 | 0.310.31 | 17%17% |
| Pathological stage II-III | Random-effects modelFixed-effects model | 44 | 0.320.34 | 0.16 to 0.630.27 to 0.44 | 3.278.53 | 0.001<0.00001 | 0.000020.00002 | 85%85% |
| Pathological stage I-III (stage I >70%) | Random-effects modelFixed-effects model | 44 | 0.550.55 | 0.32 to 0.950.38 to 0.80 | 2.143.17 | 0.030.002 | 0.180.18 | 38%38% |
| OS | Random-effects modelFixed-effects model | 66 | 0.650.76 | 0.36 to 1.170.57 to 1.01 | 1.451.87 | 0.150.06 | 0.010.01 | 66%66% |

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