Study criteria:

(a) All T-ALL patients diagnosed by immunophenotypic analyses according to WHO classification;
(b) NOTCH1 and FBXW7 mutation identified by direct sequencing of polymerase chain reaction (PCR)-amplified products;
(c) Case studies, review articles, and studies involving fewer than three patients were excluded;
(d) Randomized controlled trials to compare immunotherapy versus control therapy and including children and adults;
(e) Adequate survival information and patterns of failure data were needed.

Supplementary Figure 1: Flow of identifying the 18 trials.
Supplementary Figure 2: Six funnel plots in this meta-analysis. (A) funnel plot of hazard ratio (HR) of 5-year overall survival in NOTCH1/FBXW7 mutations group. (B) Funnel plot of hazard ratio (HR) of 5-year progression-free survival in NOTCH1/FBXW7 mutations group. (C) Funnel plot of hazard ratio (HR) of 5-year overall survival in NOTCH1 mutations group. (D) Funnel plot of hazard ratio (HR) of 5-year progression-free survival in NOTCH1 mutations group. (E) Funnel plot of hazard ratio (HR) of 5-year overall survival in FBXW7 mutations group. (F) Funnel plot of hazard ratio (HR) of 5-year progression-free survival in FBXW7 mutations group.
### Supplementary Table 1: Assessing quality of all the included studies

| Studies                      | Randomization procedure | Estimation of sample size | Allocation concealment blinding of outcome assessor | Loss to follow-up dropout | Jadad scores |
|------------------------------|-------------------------|---------------------------|----------------------------------------------------|----------------------------|--------------|
| Abdelali et al. (2011)       | Yes                     | Yes                       | No                                                 | Yes                        | Yes          | 3            |
| Asnafi et al. (2010)         | Yes                     | Yes                       | No                                                 | No                         | Yes          | 3            |
| Baldus et al. (2009)         | Yes                     | Yes                       | No                                                 | No                         | Yes          | 3            |
| Breit et al. (2006)          | Yes                     | Yes                       | Yes                                                | No                         | Yes          | 3            |
| Bonn et al. (2013)           | Yes                     | Yes                       | No                                                 | Yes                        | Yes          | 3            |
| Callens et al. (2012)        | Yes                     | Yes                       | No                                                 | Yes                        | Yes          | 3            |
| Clappier et al. (2010)       | Yes                     | Yes                       | No                                                 | No                         | Yes          | 3            |
| Erbilgin et al. (2010)       | Yes                     | Yes                       | No                                                 | No                         | Yes          | 3            |
| Fogelstrand et al. (2014)    | Yes                     | Yes                       | No                                                 | Yes                        | Yes          | 3            |
| Gao et al. (2014)            | Yes                     | Yes                       | No                                                 | Yes                        | Yes          | 3            |
| Huh et al. (2013)            | Yes                     | Yes                       | No                                                 | Yes                        | Yes          | 3            |
| Kox et al. (2010)            | Yes                     | Yes                       | No                                                 | Yes                        | Yes          | 3            |
| Jenkinson et al. (2010)      | Yes                     | Yes                       | No                                                 | Yes                        | Yes          | 3            |
| Mansour et al. (2009)        | Yes                     | Yes                       | No                                                 | Yes                        | Yes          | 3            |
| Mansur et al. (2012)         | No                      | No                        | No                                                 | Yes                        | Yes          | 2            |
| Myoung-Ja et al. (2008)      | No                      | No                        | No                                                 | Yes                        | Yes          | 2            |
| Trinquand et al. (2013)      | Yes                     | Yes                       | No                                                 | Yes                        | Yes          | 3            |
| Zuurbier et al. (2010)       | Yes                     | Yes                       | No                                                 | Yes                        | Yes          | 3            |

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