**Supplementary Figure 1:** Cumulative incidence of graft- versus-host disease (GVHD). **(A)** Cumulative incidence of 100-day grade I–IV aGVHD in the allo-HSCT group. **(B)** Cumulative incidence of 2-year limited and extensive cGVHD in the allo-HSCT group. aGVHD: acute GVHD; auto-HSCT: Autologous hematopoietic stem cell transplantation; allo-HSCT: Allogeneic HSCT; cGVHD: chronic GVHD.



**Supplementary Figure 2:** Subgroup analysis about patients with different diseases. When excluding ALK+ patient, patients in the auto-HSCT group still had better 3-year OS [71% (95% CI 57–88%) *vs.* 50% (95% CI 37–67%), *P*= 0.010] **(A)** than that in the allo-HSCT group (*n*= 49), with no difference in PFS [56% (95% CI 42–76%) *vs.* 46% (95% CI 34–64%), *P*= 0.080] **(B)**. ALK: Anaplastic lymphoma kinase; auto-HSCT: Autologous hematopoietic stem cell transplantation; allo-HSCT: Allogeneic HSCT; CI: Confidence interval; OS: Overall survival; PFS: Progression-free survival.



**Supplementary Table S1: Causes of death of the study.**

|  |  |  |
| --- | --- | --- |
| **Parameters** | **Auto-HSCT** | **Allo-HSCT** |
| Disease progression | 9 (56) | 13 (48) |
| Infection | 4 (25) | 2 (7) |
|  Sepsis | 1 | 1 |
|  Pneumonia | 3 | 1 |
| Engraftment failure | 0 | 1 (4) |
| Graft-versus-host disease | 0 | 3 (11)  |
| Hemorrhage | 1 (6) | 3 (11) |
| Gastrointestinal Hemorrhage | 0 | 1 |
| Cerebral hemorrhage | 1 | 2 |
| Multi-organ failure | 2 (13) | 5 (19) |
| Total | 16 (100) | 27 (100) |

Values are presented as *n* (%).Auto-HSCT: Autologous hematopoietic stem cell transplantation; Allo-HSCT: Allogeneic hematopoietic stem cell transplantation.