CLAIMS

We claim:

1. Use of a farnesyltransferase inhibitor (FTI), optionally tipifarnib, in the manufacture of a medicament for the treatment of a CXCL12-expressing cancer in a subject, wherein the cancer is peripheral T-cell lymphoma (PTCL) or acute myeloid leukemia (AML).

2. The use of claim 1, wherein the PTCL is relapsed or refractory PTCL.

3. The use of claim 1, wherein the PTCL is lymphoma is angioimmunoblastic T-cell lymphoma (AITL).

4. The use of claim 3, wherein the AITL is relapsed or refractory AITL.

5. The use of claim 1, wherein the AML is newly diagnosed AML.

6. The use of claim 1 or 5, wherein the subject having AML is either an elderly patient, unfit for chemotherapy, or with poor-risk AML.

7. The use of claim 1, 5 or 6, wherein the AML is relapsed or refractory AML.

8. The use of any one of claims 1-7, wherein the FTI, optionally tipifarnib, is to be selectively administered to a subject having a ratio of an expression level of CXCL12 to an expression level of CXCR4 that is higher than 0.2.

9. The use of claim 8, wherein the reference ratio is 1/4, 1/3, 1/2, 1, 2, 3, 4, 5, 6, 7, 8, 9, or 10.

10. The use of any one of claims 1-9, wherein the FTI, optionally tipifarnib, is to be selectively administered to a subject that does not have a single nucleotide variant (SNV) in the 3’ UTR of CXCL12.

11. The use of claim 10, wherein the SNV in the 3’ UTR of CXCL12 is rs2839695.

12. The use of any one of claims 1-11, wherein the FTI, optionally tipifarnib, is to be selectively administered to a subject having a single nucleotide variant in SIK3.

13. The use of any one of claims 1-12, wherein the FTI, optionally tipifarnib, is to be selectively administered to a subject having a R2729Q variant in CENPF.

14. The use of any one of claims 1-13, wherein the FTI, optionally tipifarnib, is to be administered at a dose of 0.05-500 mg/kg body weight.

15. The use of any one of claims 1-14, wherein the FTI, optionally tipifarnib, is to be administered twice a day.

16. The use of claim 15, wherein the FTI, optionally tipifarnib, is to be administered at a dose of 200-1200 mg twice a day.

17. The use of claim 15, wherein the FTI, optionally tipifarnib, is to be administered at a dose of 100 mg, 200 mg, 300 mg, 400 mg, 600 mg, 900 mg or 1200 mg twice a day.

18. The use of any one of claims 1-13, wherein the FTI, optionally tipifarnib, is to be administered on days 1-7 and 15-21 of a 28-day treatment cycle.

19. The use of any one of claims 1-13, wherein the FTI, optionally tipifarnib, is to be administered on days 1-21 of a 28-day treatment cycle.

20. The use of any one of claims 1-13, wherein the FTI, optionally tipifarnib, is to be administered on days 1-7 of a 28-day treatment cycle.

21. The use of claim 20, wherein the FTI, optionally tipifarnib, is to be administered for at least 1 cycle.

22. The use of any one of claims 19-21, wherein the FTI, optionally tipifarnib, is to be administered at a dose of 900 mg twice a day.

23. The use of any one of claims 19-21, wherein the FTI, optionally tipifarnib, is to be administered at a dose of 600 mg twice a day.

24. The use of any one of claims 19-21, wherein the FTI, optionally tipifarnib, is to be administered at a dose of 400 mg twice a day.

25. The use of any one of claims 19-21, wherein the FTI, optionally tipifarnib, is to be administered at a dose of 300 mg twice a day.

26. The use of any one of claims 19-21, wherein the FTI, optionally tipifarnib, is to be administered at a dose of 200 mg twice a day.

27. The use of any one of claims 1-26, wherein the FTI, optionally tipifarnib, is to be administered before, during, or after radiation.

28. The use of any one of claims 1-27, wherein the FTI, optionally tipifarnib, is to be administered in combination with a therapeutically effective amount of a second active agent or a support care therapy.