WHAT IS CLAIMED:

1. A method for treating a hematologic cancer in a subject comprising administering a therapy comprising an anti-CD30 antibody drug conjugate and an anti-PD-1 antibody, doxorubicin and dacarbazine.

2. The method of claim 1, wherein the anti-PD-1 antibody is administered at least 30 minutes after each administration of anti-CD30 antibody drug conjugate.

3. The method of claim 1 or 2, wherein the anti-PD-1 antibody is administered by intravenous infusion for a duration of approximately 60 minutes.

4. The method of any one of the preceding claims, wherein the anti-PD-1 antibody is administered to a subject that has not received anti-CD30 antibody drug conjugate therapy previously.

5. The method of any one of the preceding claims, wherein the anti-CD30 antibody drug conjugate is administered to a subject that has not received anti-CD30 antibody drug conjugate therapy previously.

6. The method of any one of the preceding claims, wherein the anti-CD30 antibody drug conjugate and anti-PD-1 antibody are administered every 2 weeks.

7. The method of claim 1 wherein the anti-PD-1 antibody is administered beginning with cycle 1 of the administration of anti-CD30 antibody drug conjugate.

8. The method of anyone of the preceding claims, wherein the anti-CD30 antibody drug conjugate and anti-PD-1 antibody are administered on day 1 and day 15 of a 28-day cycle.

9. The method of any one of the preceding claims, wherein the anti-CD30 antibody drug conjugate and anti-PD-1 antibody are administered for no more than six cycles.

10. The method of any one of the preceding claims, wherein the anti-CD30 antibody drug conjugate and anti-PD-1 antibody are administered for four to six cycles.

11. The method of any one of the preceding claims further comprising administering a chemotherapy consisting essentially of doxorubicin and dacarbazine (AD) as a combination therapy.

12. The method of any one of the preceding claims ,wherein the anti-CD30 antibody of the anti-CD30 antibody drug conjugate comprises

i) a heavy chain CDR1 set out in SEQ ID NO: 4, a heavy chain CDR2 set out in SEQ ID NO: 6, a heavy chain CDR3 set out in SEQ ID NO: 8; and

ii) a light chain CDR1 set out in SEQ ID NO: 12, a light chain CDR2 set out in SEQ ID NO: 14, and a light chain CDR13 set out in SEQ ID NO: 16.

13. The method of any one of the preceding claims, wherein the anti-CD30 antibody of the anti-CD30 antibody drug conjugate comprises

i) an amino acid sequence at least 85% identical to a heavy chain variable region set out in SEQ ID NO: 2 and

ii) an amino acid sequence at least 85% identical to a light chain variable region set out in SEQ ID NO: 10.

14. The method of any one of the preceding claims, wherein the anti-CD30 antibody of the anti-CD30 antibody drug conjugate is a monoclonal anti-CD30 antibody.

15. The method of any one of the preceding claims, wherein the anti-CD30 antibody of the anti-CD30 antibody drug conjugate is a chimeric AC10 antibody.

16. The method of any one of the preceding claims, wherein the antibody drug conjugate comprises monomethyl auristatin E and a protease-cleavable linker.

17. The method of claim 16, wherein the protease cleavable linker is comprises a thiolreactive spacer and a dipeptide.

18. The method of claim 16 or 17, wherein the protease cleavable linker consists of a thiolreactive maleimidocaproyl spacer, a valine–citrulline dipeptide, and a p-amino-benzyloxycarbonyl spacer.

19. The method of any one of the preceding claims, wherein the anti-CD30 antibody drug conjugate is brentuximab vedotin.

20. The method of any one of the preceding claims, wherein (i) the anti-PD-1 antibody cross-competes with nivolumab or pembrolizumab for binding to human PD-1; (ii) the anti-PD-1 antibody binds to the same epitope as nivolumab or pembrolizumab; (iii) the anti-PD-1 antibody is nivolumab; or (iv) the anti-PD-1 antibody is pembrolizumab.

21. The method of any one of the preceding claims, wherein the anti-PD-1 antibody is nivolumab or pembrolizumab.

22. The method of any one of the preceding claims, wherein the anti-PD-1 antibody is nivolumab.

23. The method of any one of the preceding claims, wherein the hematologic cancer comprises one or more cells that express PD-L1, PD-L2, or both PD-L1 and PD-L2.

24. The method of any one of the preceding claims, wherein the hematologic cancer is a CD30-expressing cancer and the CD30 expression is ≥10%.

25. The method of claim 24, wherein the CD30 expression is measured by a FDA approved test.

26. The method of any one of the preceding claims, wherein the anti-CD30 antibody drug conjugate is brentuximab vedotin and is administered at 1.2 mg/kg, and the anti-PD-1 antibody is nivolumab and is administered at 240 mg/dose.

27. The method of any one of the preceding claims, wherein the anti-CD30 antibody drug conjugate is brentuximab vedotin and is administered at 1.2 mg/kg, and the anti-PD-1 antibody is pembrolizumab and is administered at a dose of 1-2 mg/kg, or 100-300 mg.

28. The method of claim 26 or 27, wherein doxorubicin is administered at dose of 25 mg/m^2, and dacarbazine is administered at a dose of 375 mg/m^2.

29. The method of any one of the preceding claims, further comprising administering a granulopoiesis stimulating factor.

30. The method of claim 29, wherein the granulopoiesis stimulating factor is administered prophylactically from 1 day to 7 days after administration of anti-CD30 antibody drug conjugate.

31. The method of any one of claims 29 or 30, wherein the granulopoiesis stimulating factor is administered from 2 days to 5 days after the administration of anti-CD30 antibody drug conjugate.

32. The method of any one of claims 29 to 31, wherein the granulopoiesis stimulating factor is administered about 24 hours to about 36 hours after administration of anti-CD30 antibody drug conjugate.

33. The method of any one of claims 29 to 32, wherein the granulopoiesis stimulating factor is a granulocyte-colony stimulating factor (GCSF).

34. The method of claim 33, wherein the GCSF is a long-acting GCSF or a non long-acting GCSF.

35. The method of claim 33 or 34, wherein the GCSF is long-acting GCSF, and is administered 1 day or 2 days after the administration of anti-CD30 antibody drug conjugate.

36. The method of claim 35, wherein the G-CSF is administered about 24 hours to about 36 hours after administration of anti-CD30 antibody drug conjugate.

37. The method of claim 33 or 34, wherein the GCSF is not long acting, and is administered 1, 2, 3, 4, 5, 6 or 7 days after the administration of anti-CD30 antibody drug conjugate.

38. The method of any one of claims 29 to 37, wherein the granulopoiesis stimulating factor is administered in a dose range from 5 to 10 mcg/kg/day, or 300 to 600 mcg/day, or 6 mg/dose.

39. The method of any one of claims 29 to 38, wherein the granulopoiesis stimulating factor is administered to a subject that has not received anti-CD30 antibody drug conjugate therapy previously.

40. The method of any one of claims 29 to 39, wherein the subject has not experienced treatment-emergent grade 3-4 neutropenia after anti-CD30 antibody drug conjugate administration.

41. The method of any one of claims 29 to 40, wherein the granulopoiesis stimulating factor is given intravenously or subcutaneously.

42. The method of any one of claims 29 to 41, wherein the granulopoiesis stimulating factor is given in a single dose or multiple doses.

43. The method of any one of the preceding claims, wherein if the subject exhibits Grade 3 or Grade 4 neuropathy, the administration of anti-CD30 antibody drug conjugate therapy is withheld until peripheral neuropathy decreases to Grade 2 or less and then 0.9 mg/kg anti-CD30 antibody drug conjugate therapy is administered.

44. The method of claim 43, wherein the neuropathy is motor neuropathy or sensory neuropathy.

45. The method of any one of the preceding claims, wherein the dose of anti-CD30 antibody drug conjugate is delayed by one week if peripheral neuropathy appears, and therapy is continued when the neuropathy is resolved or determined to be Grade 1 or less.

46. The method of any one of the preceding claims, wherein the hematologic cancer is selected from the group consisting of classical Hodgkin Lymphoma, non-Hodgkin Lymphoma, cutaneous T-cell lymphoma (CTCL), and anaplastic large cell lymphoma (ALCL).

47. The method of claim 46, wherein the hematologic cancer is classical Hodgkin Lymphoma.

48. The method of claim 47, wherein the hematologic cancer is a stage IIA with bulky disease, stage IIB, stage III or stage IV classical Hodgkin Lymphoma.

49. The method of claim 46, wherein the anaplastic large cell lymphoma (ALCL) is a systemic anaplastic large cell lymphoma (sALCL).

50. The method of claim 46, wherein the cutaneous T-cell lymphoma (CTCL) is a mycosis fungoides (MF).

51. The method of claim 50, wherein the mycosis fungoides (MF) is a CD30-positive mycosis fungoides (MF).

52. The method of claim 46, wherein the cutaneous T-cell lymphoma (CTCL) is a primary cutaneous anaplastic large cell lymphoma (pcALCL).

53. The method of claim 52, wherein the subject has received prior systemic therapy.

54. The method of any one of claims 45 to 53, wherein the hematologic cancer of the subject has not been treated with a checkpoint inhibitor.

55. The method of any one of the preceding claims, wherein the subject is an adult patient.