WHAT IS CLAIMED IS:

1. A method of treating a cancer in a patient in need thereof comprising administering to the patient an effective amount of a first pharmaceutical therapy comprising a nuclease-resistant polynucleotide that hybridizes to a Grb2 nucleic acid in the patient and a second pharmaceutical therapy comprising a Bcr-Abl tyrosine kinase inhibitor.

2. The method of claim 1, wherein the polynucleotide hybridizes to the translation initiation site of a Grb2 nucleic acid.

3. The method of either claim 1 or 2, wherein the polynucleotide is an oligonucleotide having a length of 8-50 bases.

4. The method of any one of claims 1-3, wherein the polynucleotide has a sequence according to SEQ ID NO: 1.

5. The method of any one of claims 1-4, wherein the polynucleotide comprises P-ethoxy backbone linkages.

6. The method of any one of claim 1-5, wherein the polynucleotide is encapsulated in a liposome.

7. The method of claim 1, wherein the first pharmaceutical therapy further comprises a neutral lipid.

8. The method of claim 1, wherein the first pharmaceutical therapy is administered systemically.

9. The method of claim 1, wherein the first pharmaceutical therapy is formulated for intraarterial or intravenous administration.

10. The method of claim 7, wherein the first pharmaceutical therapy is administered at a dosage of from about 60 mg/m^2 and to about 90 mg/m^2.

11. The method of claim 7, wherein the first pharmaceutical therapy is administered two to four times per week.

12. The method of claim 1, wherein the Bcr-Abl tyrosine kinase inhibitor is dasatinib, imatinib, nilotinib, bosutinib, ponatinib, or bafetinib.

13. The method of claim 1, wherein the Bcr-Abl tyrosine kinase inhibitor is dasatinib.

14. The method of claim 13, wherein the dasatinib is administered at a dosage of about 140 mg.

15. The method of claim 13, wherein the dasatinib is administered once daily.

16. The method of claim 1, wherein the second pharmaceutical therapy is administered systemically.

17. The method of claim 16, wherein the second pharmaceutical therapy is administered orally, intraarterially, or intravenously.

18. The method of claim 1, wherein the first pharmaceutical therapy is administered prior to the administration of the second pharmaceutical therapy.

19. The method of claim 1, wherein the first pharmaceutical therapy and the second pharmaceutical therapy are administered concurrently.

20. The method of claim 1, wherein the first pharmaceutical therapy and the second pharmaceutical therapy are administered by distinct routes.

21. The method of claim 1, wherein the patient is a human.

22. The method of claim 1, wherein the cancer is colorectal cancer, neuroblastoma, breast cancer, pancreatic cancer, brain cancer, lung cancer, stomach cancer, a blood cancer, skin cancer, testicular cancer, prostate cancer, ovarian cancer, liver cancer or esophageal cancer, cervical cancer, head and neck cancer, non-melanoma skin cancer, or glioblastoma.

23. The method of claim 1, wherein the cancer is a blood cancer.

24. The method of claim 23, wherein the blood cancer is a chronic myelogenous leukemia (CML), an acute myeloid leukemia (AML), or a myelodysplastic syndrome (MDS).

25. The method of claim 24, wherein the CML is an accelerated CML or a blast-phase CML.

26. The method of claim 24, wherein the CML or AML is Bcr-Abl positive CML or Bcr-Abl positive AML.

27. The method of claim 26, wherein the Bcr-Abl positive CML or Bcr-Abl positive AML is positive for a T315I Bcr-Abl mutation.

28. The method of claim 24, wherein the CML or AML is a Philadelphia chromosome-positive CML or Philadelphia chromosome-positive AML.

29. The method of claim 1, wherein the patient has previously failed treatment with imatinib.

30. A method of treating a cancer or myelodysplastic syndrome (MDS) in a patient in need thereof comprising administering to the patient an effective amount of a first pharmaceutical therapy comprising a nuclease-resistant polynucleotide that hybridizes to a Grb2 nucleic acid and a second pharmaceutical therapy comprising a cytidine analogue.

31. The method of claim 30, wherein the polynucleotide hybridizes to the translation initiation site of a Grb2 nucleic acid.

32. The method of either claim 30 or 31, wherein the polynucleotide is an oligonucleotide having a length of 8-50 bases.

33. The method of any one of claims 30-32, wherein the polynucleotide has a sequence according to SEQ ID NO: 1.

34. The method of any one of claims 30-33, wherein the polynucleotide comprises P-ethoxy backbone linkages.

35. The method of any one of claim 30-34, wherein the polynucleotide is encapsulated in a liposome.

36. The method of claim 30, wherein the first pharmaceutical therapy further comprises a neutral lipid.

37. The method of claim 30, wherein the first pharmaceutical therapy is administered systemically.

38. The method of claim 30, wherein the first pharmaceutical therapy is formulated for intraarterial or intravenous administration.

39. The method of claim 36, wherein the first pharmaceutical therapy is administered at a dosage of from about 60 mg/m^2 and to about 90 mg/m^2.

40. The method of claim 36, wherein the first pharmaceutical therapy is administered two to four times per week.

41. The method of claim 1, wherein the cytidine analogue is decitabine, cytarabine, or azacitidine.

42. The method of claim 41, wherein the cytidine analogue is decitabine.

43. The method of claim 41, wherein the cytidine analogue is cytarabine.

44. The method of claim 43, wherein the cytarabine is administered at a dosage of about 20 mg.

45. The method of claim 43, wherein the cytarabine is administered twice daily.

46. The method of claim 43, wherein the cytarabine is administered subcutaneously.

47. The method of claim 30, wherein the first pharmaceutical therapy is administered prior to the administration of the second pharmaceutical therapy.

48. The method of claim 30, wherein the first pharmaceutical therapy and the second pharmaceutical therapy are administered concurrently.

49. The method of claim 30, wherein the second pharmaceutical therapy is administered prior to the administration of the first pharmaceutical therapy.

50. The method of claim 30, wherein the first pharmaceutical therapy and the second pharmaceutical therapy are administered by distinct routes.

51. The method of claim 30, wherein the patient is a human.

52. The method of claim 30, wherein the cancer is colorectal cancer, neuroblastoma, breast cancer, pancreatic cancer, brain cancer, lung cancer, stomach cancer, a blood cancer, skin cancer, testicular cancer, prostate cancer, ovarian cancer, liver cancer or esophageal cancer, cervical cancer, head and neck cancer, non-melanoma skin cancer, or glioblastoma.

53. The method of claim 52, wherein the cancer is a blood cancer.

54. The method of claim 53, wherein the blood cancer is a chronic myelogenous leukemia (CML), an acute myeloid leukemia (AML), or a myelodysplastic syndrome (MDS).

55. The method of claim 54, wherein the CML is an accelerated CML or a blast-phase CML.

56. The method of claim 54, wherein the CML or AML is a Bcr-Abl positive CML or Bcr-Abl positive AML.

57. The method of claim 56, wherein the Bcr-Abl positive CML or Bcr-Abl positive AML is positive for a T315I Bcr-Abl mutation.

58. The method of claim 54, wherein the CML or AML is a Philadelphia chromosome-positive CML or Philadelphia chromosome-positive AML.

What is claimed is:

1. Use of a first pharmaceutical therapy and a second pharmaceutical therapy in the manufacture of a medicament for the treatment of acute myeloid leukemia (AML) or myelodysplastic syndrome (MDS) in a patient in need thereof, wherein the first pharmaceutical therapy comprises a nuclease-resistant polynucleotide that hybridizes to a Grb2 nucleic acid and inhibits Grb2 expression, and wherein the second pharmaceutical therapy comprises decitabine.

2. The use of claim 1, wherein the polynucleotide hybridizes to the translation initiation site of a Grb2 nucleic acid.

3. The use of either claim 1 or 2, wherein the polynucleotide is an oligonucleotide having a length of 8-50 bases.

4. The use of any one of claims 1-3, wherein the polynucleotide has a sequence according to SEQ ID NO: 1.

5. The use of any one of claims 1-4, wherein the polynucleotide comprises P-ethoxy backbone linkages.

6. The use of any one of claims 1-5, wherein the polynucleotide is encapsulated in a liposome.

7. The use of any one of claims 1-6, wherein the first pharmaceutical therapy further comprises a neutral lipid.

8. The use of any one of claims 1-7, wherein the first pharmaceutical therapy is to be administered systemically.

9. The use of any one of claims 1-8, wherein the first pharmaceutical therapy is formulated for intraarterial or intravenous administration.

10. The use of any one of claims 1-9, wherein the first pharmaceutical therapy is to be administered at a dosage of from about 60 mg/m^2 and to about 90 mg/m^2.

11. The use of any one of claims 1-10, wherein the first pharmaceutical therapy is to be administered two to four times per week.

12. The use of any one of claims 1-11, wherein the first pharmaceutical therapy is to be administered prior to the administration of the second pharmaceutical therapy.

13. The use of any one of claims 1-11, wherein the first pharmaceutical therapy and the second pharmaceutical therapy are to be administered concurrently.

14. The use of any one of claims 1-11, wherein the second pharmaceutical therapy is to be administered prior to the administration of the first pharmaceutical therapy.

15. The use of any one of claims 1-14, wherein the first pharmaceutical therapy and the second pharmaceutical therapy are to be administered by distinct routes.

16. The use of any one of claims 1-15, wherein the patient is a human.