administering ABDNAZ to a patient suffering from cancer. The ABDNAZ formulations can be administered intravenously to the patient at a rate of, for example, at least 5 mL/hour, 10 mL/hour, 30 mL/hour, or higher rates. The rapid rate of administration reduces the time required to administer a therapeutically effective amount of ABDNAZ for treating cancer, and has particular advantages when large doses of ADBDNAZ need to be administered to the patient during the same day as the patient receives radiation therapy. The methods can be further characterized according to the magnitude of pain experienced by the patient at the site of administering the ABDNAZ formulation, wherein the magnitude of any pain experienced by the patient is small. The present disclosure having been generally described is explained in more detail in the aspects and embodiments below and in the detailed description.

[0007a] In one aspect of the present disclosure, there is provided a use of an ABDNAZ formulation comprising whole blood, ABDNAZ, and an anticoagulant, in the manufacture of a medicament for treating cancer in a patient in need thereof, wherein the ABDNAZ formulation is to be intravenously administered to the patient, wherein ABDNAZ is 2-bromo-1-(3,3-dinitroazetidin-1-yl)ethenone.

[0007b] In another aspect of the present disclosure, there is provided a use of an ABDNAZ formulation comprising whole blood, ABDNAZ, and an anticoagulant, in the manufacture of a medicament for treating cancer in a patient in need thereof, wherein the medicament is to be used for rapid intravenous administration to the patient while minimizing injection site pain experienced by the patient, wherein the ABDNAZ formulation is to be intravenously administered to the patient at a rate of at least 10 mL/hour, and wherein any pain experienced by the patient at the site of intravenous administration of the ABDNAZ formulation due to intravenous administration of the ABDNAZ formulation is no greater than Grade 2, or no greater than Grade 1, wherein ABDNAZ is 2-bromo-1-(3,3-dinitroazetidin-1-yl)ethenone.

What is claimed is:

1. Use of an ABDNAZ formulation comprising whole blood, ABDNAZ, and an anticoagulant, in the manufacture of a medicament for treating cancer in a patient in need thereof, wherein the ABDNAZ formulation is to be intravenously administered to the patient, wherein ABDNAZ is 2-bromo-1-(3,3-dinitroazetidin-1-yl)ethenone.

2. The use of claim 1, wherein the whole blood is autologous whole blood.

3. The use of claim 1 or 2, wherein the ABDNAZ formulation is to be intravenously administered to the patient at a rate of at least 5 mL/hour.

4. The use of any one of claims 1-3, wherein the cancer is a solid tumor, brain cancer, bladder cancer, breast cancer, cervical cancer, cholangiocarcinoma, colon cancer, colorectal cancer, endometrial cancer, esophageal cancer, lung cancer, liver cancer, melanoma, ovarian cancer, pancreatic cancer, prostate cancer, rectal cancer, renal cancer, stomach cancer, testicular cancer, or uterine cancer, leukemia, lymphoma,B-cell lymphoma, or non-Hodgkin lymphoma.

5. The use of any one of claims 1-4, wherein any pain experienced by the patient at the site of intravenous administration of the ABDNAZ formulation due to intravenous administration of the ABDNAZ formulation is no greater than Grade 2, or no greater than Grade 1.

6. Use of an ABDNAZ formulation comprising whole blood, ABDNAZ, and an anticoagulant, in the manufacture of a medicament for treating cancer in a patient in need thereof, wherein the medicament is to be used for rapid intravenous administration to the patient while minimizing injection site pain experienced by the patient, wherein the ABDNAZ formulation is to be intravenously administered to the patient at a rate of at least 10 mL/hour, and wherein any pain experienced by the patient at the site of intravenous administration of the ABDNAZ formulation due to intravenous administration of the ABDNAZ formulation is no greater than Grade 2, or no greater than Grade 1, wherein ABDNAZ is 2-bromo-1-(3,3-dinitroazetidin-1-yl)ethenone.

7. The use of claim 6, wherein the patient is suffering from cancer, preferably wherein the cancer is a solid tumor, brain cancer, bladder cancer, breast cancer, cervical cancer, cholangiocarcinoma, colon cancer, colorectal cancer, endometrial cancer, esophageal cancer, lung cancer, liver cancer, melanoma, ovarian cancer, pancreatic cancer, prostate cancer, rectal cancer, renal cancer, stomach cancer, testicular cancer, uterine cancer, leukemia, lymphoma,B-cell lymphoma, or non-Hodgkin lymphoma.

8. The use of any one of claims 1-7, wherein the ABDNAZ formulation contains ABDNAZ at a concentration of:

   (i) at least 10 μg/mL;

   (ii) at least 20 μg/mL;

   (iii) at least 50 μg/mL;

   (iv) at least 100 μg/mL;

   (v) at least 150 μg/mL;

   (vi) in the range of 10 μg/mL to 1 mg/mL;

   (vii) in the range of 10 μg/mL to 0.5 mg/mL;

   (viii) in the range of 10 μg/mL to 250 μg/mL; or

   (ix) in the range of 20 μg/mL to 200 μg/mL.

9. The use of any one of claims 1-8, wherein:

   (i) the ABDNAZ formulation consists essentially of whole blood, ABDNAZ, and an anticoagulant;

   (ii) the ABDNAZ formulation consists of whole blood, ABDNAZ, an anticoagulant, and optionally one or more of water, a polyethylene glycol, and N,N-dimethylacetamide;

   (iii) the ABDNAZ formulation consists of whole blood, ABDNAZ, an anticoagulant, and optionally one or more of water, a polyethylene glycol having a number average molecular weight in the range of 200 g/mol to 600 g/mol, and N,N-dimethylacetamide;

   (iv) the ABDNAZ formulation consists of whole blood, ABDNAZ, an anticoagulant, water, a polyethylene glycol having a number average molecular weight in the range of 200 g/mol to 600 g/mol, and N,N-dimethylacetamide;

(v) the ABDNAZ formulation consists of whole blood, ABDNAZ, an anticoagulant, and optionally one or more of water, a polyethylene glycol having a number average molecular weight of 400 g/mol, and N,N-dimethylacetamide; or

(vi) the ABDNAZ formulation consists of whole blood, ABDNAZ, an anticoagulant, water, a polyethylene glycol having a number average molecular weight of 400 g/mol, and N,N-dimethylacetamide.

10. The use of any one of claims 1-9, wherein:

(i) the anticoagulant comprises one or more of heparin and a citrate salt;

(ii) the anticoagulant is a solution comprising an alkali metal citrate salt, dextrose, and water; or

(iii) the anticoagulant is present in the ABDNAZ formulation in an amount ranging from 0.1% wt/wt to 15% w/w.

11. The use of any one of claims 1-10, wherein the whole blood constitutes:

(i) at least 30% wt/wt of the ABDNAZ formulation;

(ii) at least 60% wt/wt of the ABDNAZ formulation;

(iii) at least 75% wt/wt of the ABDNAZ formulation;

(iv) at least 90% wt/wt of the ABDNAZ formulation;

(v) from 60% wt/wt to 99% wt/wt of the ABDNAZ formulation;

(vi) from 70% wt/wt to 95% wt/wt of the ABDNAZ formulation; or

(vii) from 75% wt/wt to 90% wt/wt of the ABDNAZ formulation.

12. The use of any one of claims 1-11, wherein:

(i) there is from 90 mL to 110 mL of whole blood in the ABDNAZ formulation;

(ii) there is from 95 mL to 105 mL of whole blood in the ABDNAZ formulation;

(iii) there is 100 mL of whole blood in the ABDNAZ formulation;

(iv) there is 10 mL to 20 mL of whole blood in the ABDNAZ formulation; or

(v) there is 10 mL of whole blood in the ABDNAZ formulation.

13. The use of any one of claims 1-12, wherein the ABDNAZ formulation has a volume in the range of:

(i) 50 mL to 200 mL;

(ii) 75 mL to 150 mL;

(iii) 90 mL to 140 mL;

(iv) 100 mL to 140 mL;

(v) 100 mL to 120 mL; or

(vi) 10 mL to 20 mL.

14. The use of any one of claims 1-13, wherein the ABDNAZ formulation is to be intravenously administered, and wherein the intravenous administration of the ABDNAZ formulation commences within:

(i) about 1 hour after formation of the ABDNAZ formulation;

(ii) about 30 minutes after formation of the ABDNAZ formulation;

(iii) about 20 minutes after formation of the ABDNAZ formulation;

(iv) about 6 hours after formation of the ABDNAZ formulation; or

(v) about 4 hours after formation of the ABDNAZ formulation.

15. The use of any one of claims 1-14, wherein an aliquot of whole blood is to be obtained from the patient, and then using said aliquot to prepare the ABDNAZ formulation for administration to the patient.

16. The use of any one of claims 1-15, wherein the ABDNAZ formulation is to be intravenously administered, and wherein the intravenous administration is central intravenous administration, or peripheral intravenous administration.

17. The use of any one of claims 1-16, wherein the patient is an adult human, a pediatric human, does not suffer from anemia or have reduced blood volume, or has at least 95% of the amount of their average daily blood volume.