can reduce various side effects of cancer chemotherapy and improve the treatment completion rate of cancer chemotherapy, which resulted in the completion of the present invention.

Accordingly, the present invention is as described below.

[0014]

In one aspect, there is provided use of an agent comprising (A) cystine or a derivative thereof and (B) theanine in combination in the manufacture of a medicament for reducing a side effect of cancer chemotherapy, wherein said medicament is to be administered to a subject in need thereof.

In another aspect, there is provided use of an agent comprising (A) cystine or a derivative thereof and (B) theanine in combination in the manufacture of a medicament for improving the treatment completion rate of cancer chemotherapy, wherein said medicament is to be administered to a subject in need thereof.

In another aspect, there is provided a prophylactic and/or therapeutic drug for use in treating cancer, comprising an agent for reducing a side effect of cancer chemotherapy and an anticancer agent in combination, wherein the agent for reducing a side effect of cancer chemotherapy comprises (A) cystine or a derivative thereof and (B) theanine in combination.

In yet another aspect, there is provided use of the prophylactic and/or therapeutic drug as described herein in the manufacture of a medicament for preventing and/or treating cancer, wherein said medicament is to be administered to a subject in need thereof.

In yet another aspect, there is provided use of a combination of (A) cystine or a derivative thereof and (B) theanine in the manufacture of a medicament for use in reducing a side effect of cancer chemotherapy.

In yet another aspect, there is provided use of a combination of (A) cystine or a derivative thereof and (B) theanine in the manufacture of a medicament for use in improving the treatment completion rate of cancer chemotherapy.

In yet another aspect, there is provided a combination of (A) cystine or a derivative thereof and (B) theanine and an anticancer agent for use in preventing and/or treating cancer.

Also disclosed are:

[1] An agent for reducing side effects of cancer chemotherapy, comprising (A) cystine or a derivative thereof and (B) theanine in combination.

[2] The agent of the above-mentioned [1], which is a composition comprising (A) cystine or a derivative thereof and (B) theanine.

[3] The agent of the above-mentioned [1] or [2], wherein the weight ratio of (A) cystine or a derivative thereof and (B) theanine is A:B=100:1 - 1:100.

[4] The agent of any one of the above-mentioned [1] - [3], which is an agent for improving the treatment completion rate of cancer chemotherapy.

[5] A prophylactic and/or therapeutic drug for cancer, comprising the agent of any one of the above-mentioned [1] - [3], and an anticancer agent in combination.

[6] An agent for improving the treatment completion rate of cancer chemotherapy, comprising (A) cystine or a derivative thereof and (B) theanine in combination.

[7] The agent of the above-mentioned [6], which is a composition comprising (A) cystine or a derivative thereof and (B) theanine.

[8] The agent of the above-mentioned [6] or [7], wherein the weight ratio of (A) cystine or a derivative thereof and (B) theanine is A:B=100:1 - 1:100.

[9] A prophylactic and/or therapeutic drug for cancer, comprising (A) cystine or a derivative thereof, (B) theanine, and an anticancer agent in combination.

[10] The prophylactic and/or therapeutic drug of the above-mentioned [9], which is a composition comprising (A) cystine or a derivative thereof and (B) theanine, and an anticancer agent

1. Use of an agent comprising (A) cystine or a derivative thereof and (B) theanine in combination in the manufacture of a medicament for reducing a side effect of cancer chemotherapy, wherein said medicament is to be administered to a subject in need thereof.

2. The use according to claim 1, wherein said medicament is a medicament for improving the treatment completion rate of cancer chemotherapy.

3. Use of an agent comprising (A) cystine or a derivative thereof and (B) theanine in combination in the manufacture of a medicament for improving the treatment completion rate of cancer chemotherapy, wherein said medicament is to be administered to a subject in need thereof.

4. The use according to any one of claims 1 to 3, wherein said agent comprises: a composition comprising (A) cystine or a derivative thereof and (B) theanine.

5. The use according to any one of claims 1 to 3, wherein said agent comprises: a first composition comprising(A) cystine or a derivative thereof; and a second composition comprising(B) theanine.

6. The use according to any one of claims 1 to 5, wherein said agent consists of (A) cystine or a derivative thereof and (B) theanine and at least one selected from the group consisting of binder, excipient, swelling agent, lubricant, flowability improver, gloss agent, sweetener, flavor, preservative, coating agent, carrier and stabilizer.

7. The use according to any one of claims 1 to 6, wherein said agent consists of (A) cystine or a derivative thereof and (B) theanine.

8. The use according to any one of claim 1 to 7, wherein the weight ratio of (A) cystine or a derivative thereof and (B) theanine is A:B=100:1 - 1:100.

9. The use according to any one of claims 1 to 8, wherein the weight ratio of (A) cystine or a derivative thereof and (B) theanine is A:B=20:1 - 1:2.

10. A prophylactic and/or therapeutic drug for use in treating cancer, comprising an agent for reducing a side effect of cancer chemotherapy and an anticancer agent in combination, wherein the agent for reducing a side effect of cancer chemotherapy comprises (A) cystine or a derivative thereof and (B) theanine in combination.

11. The prophylactic and/or therapeutic drug for use in treating cancer according to claim 10, wherein said agent for reducing a side effect of cancer chemotherapy comprises: a composition comprising (A) cystine or a derivative thereof and (B) theanine.

12. The prophylactic and/or therapeutic drug for use in treating cancer according to claim 10 or 11, wherein said agent for reducing a side effect of cancer chemotherapy comprises: a first composition comprising(A) cystine or a derivative thereof; and a second composition comprising(B) theanine.

13. The prophylactic and/or therapeutic drug for use in treating cancer according to any one of claims 10 to 12, wherein said agent for reducing a side effect of cancer chemotherapy consists of (A) cystine or a derivative thereof and (B) theanine and at least one selected from the group consisting of binder, excipient, swelling agent, lubricant, flowability improver, gloss agent, sweetener, flavor, preservative, coating agent, carrier and stabilizer.

14. The prophylactic and/or therapeutic drug for use in treating

cancer according to any one of claims 10 to 13, wherein said agent for reducing a side effect of cancer chemotherapy consists of (A) cystine or a derivative thereof and (B) theanine.

15. The prophylactic and/or therapeutic drug for use in treating cancer according to any one of claims 10 to 14, wherein the weight ratio of (A) cystine or a derivative thereof and (B) theanine is A:B=100:1 - 1:100.

16. The prophylactic and/or therapeutic drug for use in treating cancer according to any one of claims 10 to 15, wherein the weight ratio of (A) cystine or a derivative thereof and (B) theanine is A:B=20:1 - 1:2.

17. Use of the prophylactic and/or therapeutic drug according to any one of claims 10 to 16 in the manufacture of a medicament for preventing and/or treating cancer, wherein said medicament is to be administered to a subject in need thereof.

18. Use of a combination of (A) cystine or a derivative thereof and (B) theanine in the manufacture of a medicament for use in reducing a side effect of cancer chemotherapy.

19. Use of a combination of (A) cystine or a derivative thereof and (B) theanine in the manufacture of a medicament for use in improving the treatment completion rate of cancer chemotherapy.

20. A combination of (A) cystine or a derivative thereof and (B) theanine and an anticancer agent for use in preventing and/or treating cancer.

21. The use according to any one of claims 1 to 9 and 17 to 19, or the prophylactic and/or therapeutic drug for cancer according to any one of claims 10 to 16 or the combination of claim 20, wherein the cystine derivative comprises cysteine and compounds derived from cysteine.

22. The use according to any one of claims 1 to 9, 17 to 19 and 21, or the prophylactic and/or therapeutic drug for cancer according to any one of claims 10 to 16 and 21, or the combination of claim 20 or 21, wherein the cystine derivative is selected from the group consisting of glutathione, glutathione disulfide, glutathione alkyl ester, oxidized glutathione dialkyl ester, cysteine, cysteine alkyl ester, 3-[(carboxymethyl)thio]alanine, N-acylcysteine, N-acylcysteine alkyl ester, N-acylcystine, N-acylcystine alkyl ester, N,N'-diacylcystine, N,N'-diacylcystine dialkyl ester and S-alkylcysteine sulfoxide.

23. The use according to any one of claims 1 to 9, 17 to 19 and 21 to 22, or the prophylactic and/or therapeutic drug for cancer according to any one of claims 10 to 16 and 21 to 22, or the combination of any one of claims 20 to 22, wherein (A) is cystine.

24. The use according to any one of claims 1 to 9, 17 to 19 and 21 to 23, or the prophylactic and/or therapeutic drug for cancer according to any one of claims 10 to 16 and 21 to 23, or the combination of any one of claims 20 to 23, wherein (A) is L-cystine.

25. The use according to any one of claims 1 to 9, 17 to 19 and 21 to 24, or the prophylactic and/or therapeutic drug for cancer according to any one of claims 10 to 16 and 21 to 24, or the combination of any one of claims 20 to 24, wherein (B) is L-theanine.

26. The use according to any one of claims 1 to 2, 4 to 9, 17 to 18 and 21 to 25, or the prophylactic and/or therapeutic drug for cancer according to any one of claims 10 to 16 and 21 to 25, wherein the side effect of cancer chemotherapy comprises a side effect that can lead to the suspension of cancer chemotherapy.

27. The use, the prophylactic and/or therapeutic drug for cancer

of claim 26, wherein the side effect that can lead to the suspension of cancer chemotherapy is selected from the group consisting of anorexia, nausea, vomiting, diarrhea, stomatitis, malaise and granulocytopenia.

Abstract

The present invention can provide an agent for reducing side effects of cancer chemotherapy, which can reduce various side effects of cancer chemotherapy and improve the treatment completion rate of cancer chemotherapy.

An agent for reducing side effects of cancer chemotherapy, containing (A) cystine or a derivative thereof and (B) theanine in combination.