

Accordingly, there is a need for methods of determining which patients respond particular well to angiogenesis inhibitor therapy.

In a first aspect, there is provided the use of bevacizumab in the manufacture of a medicament for the improvement of overall survival of a patient suffering from cancer wherein it is determined from a patient sample if the patient suffering from said cancer has the variant allele of the VEGFR-1 gene corresponding to rs9554316 (SEQ ID NO. 1), wherein position 51 is G, and whereby the bevacizumab is administered to said patient having said variant allele of the VEGFR-1 gene.

In a second aspect, there is provided the use of bevacizumab in the manufacture of a medicament for the improvement of progression-free survival of a patient suffering from cancer wherein it is determined from a patient sample if the patient suffering from said cancer has the variant allele of the VEGFR-1 gene corresponding to rs9554316 (SEQ ID NO. 1), wherein position 51 is G, and whereby the bevacizumab is administered to said patient having said variant allele of the VEGFR-1 gene.

In a third aspect, there is provided the use of bevacizumab in the manufacture of a medicament in an improved chemotherapy regimen for a patient suffering from cancer wherein it is determined from a patient sample if a patient suffering from said cancer has the variant allele of the VEGFR-1 gene corresponding to rs9554316 (SEQ ID NO. 1), wherein position 51 is G, and whereby bevacizumab is administered to the patient having the variant allele of the VEGFR-1 gene.

In a fourth aspect, there is provided an *in vitro* method for the identification of a responder for or a patient sensitive to bevacizumab, said method comprising determining from a patient sample if a patient suffering from cancer has the variant allele of the VEGFR-1 gene corresponding to rs9554316 (SEQ ID NO. 1), wherein position 51 is G, whereby the presence of said allele of the VEGFR-1 gene is indicative for a responding patient or is indicative for a sensitivity of the patient to bevacizumab.

In a fifth aspect, there is provided the use of primers and/or probes for predicting the response to or sensitivity to bevacizumab therapy of a patient suffering or suspected to suffer from metastatic pancreatic cancer or renal cell cancer wherein the primers and/or probes are capable of detecting the variant allele of rs9554316 (SEQ ID NO. 1), whereby a G at position 51 of rs9554316 (SEQ ID NO. 1) is indicative of a patient response or sensitive to bevacizumab therapy.

In a sixth aspect, there is provided the use of a kit for determining the patient sample as defined above, comprising primers or probes capable of determining the presence of the variant allele of the VEGFR-1 gene corresponding to rs9554316 (SEQ ID NO. 1).

The present invention, therefore, provides a method for improving the overall survival of a patient suffering from a malignant disease or a disease involving physiological and pathological angiogenesis by treatment with an angiogenesis inhibitor, said method comprising the following steps:

- (a) determining from a patient sample if the patient suffering from a malignant disease or a disease involving physiological and pathological angiogenesis has one or more variant alleles of the VEGFR-1 gene; and
- (b) administering an angiogenesis inhibitor to the patient having one or more variant alleles of the VEGFR-1 gene.

The malignant disease or a disease involving physiological and pathological angiogenesis may be pancreatic cancer. The angiogenesis inhibitor may be bevacizumab.

Accordingly, the present invention relates to a method for improving the overall survival of a patient suffering from a malignant disease or a disease involving physiological and pathological angiogenesis by treatment with an angiogenesis inhibitor, said method comprising the following steps:

- (a) obtaining a sample from a patient suffering from a malignant disease or a disease involving physiological and pathological angiogenesis;
- (b) determining if the patient has one or more variant alleles of the VEGFR-1 gene; and
- (c) administering an angiogenesis inhibitor to the patient having one or more variant alleles of the VEGFR-1 gene.

The malignant disease or a disease involving physiological and pathological angiogenesis may be pancreatic cancer. The angiogenesis inhibitor may be bevacizumab.

Therefore, the present invention relates to a method for improving the progression-free survival of a patient suffering from a malignant disease or a disease involving physiological and pathological angiogenesis by treatment with an angiogenesis inhibitor, said method comprising the following steps:

- (a) determining from a patient sample if the patient suffering from a malignant disease or a disease involving physiological and pathological angiogenesis has one or more variant alleles of the VEGFR-1 gene; and
- (b) administering an angiogenesis inhibitor to the patient having one or more variant alleles of the VEGFR-1 gene.