Claims

~~1. A method for improving the progression-free survival of a patient suffering from metastatic colorectal cancer by adding bevacizumab to a chemotherapy regimen, said method comprising:~~

~~(a) determining the expression level of one or more of VEGFA, HER2 and neuropilin in a sample that had been obtained from said patient; and~~

~~(b) adding bevacizumab to a chemotherapy regimen for the patient having an increased level of VEGFA, and/or a decreased level of HER2 and/or neuropilin relative to control levels determined in patients diagnosed with metastatic colorectal cancer.~~

~~2~~1. An in vitro method for the identification of a patient responsive to or sensitive to the addition of bevacizumab treatment to a chemotherapy regimen, said method comprising:

determining the expression level of ~~one or more of~~ VEGFA~~, HER2 and neuropilin~~ in a sample that had been obtained from a patient prior to chemotherapy, said patient suspected to suffer from or being prone to suffer from metastatic colorectal cancer;

whereby an increased level of VEGFA and/or CD31~~, and/or a decreased level of HER2 and/or neuropilin~~ relative to control levels determined in patients suffering from metastatic colorectal cancer is indicative of a sensitivity of the patient to the addition of bevacizumab to said regimen.

~~3~~2. The method of claim 1 ~~or 2~~, wherein the protein expression level of VEGFA is detected.

~~4. The method of any one of claims 1-3, wherein the protein expression level of HER2 is detected.~~

~~5. The method of any one of claims 1-4, wherein the protein expression level of neuropilin is detected.~~

~~6~~3. The method of ~~any one of~~ claims ~~3~~2~~-5~~, wherein said protein expression level is detected by an immunohistochemical method (IHC).

~~74~~. The method of any one of claims 1-~~63~~, wherein said sample is selected from the group consisting of gastric tissue resection, gastric tissue biopsy or metastatic lesion.

~~85~~. The method of any one of claims 1-~~74~~, wherein said chemotherapy regimen is an oxaliplatin-based chemotherapy regimen.

~~96~~. The method of claim ~~85~~, wherein said oxaliplatin-based chemotherapy regimen is a regimen of oxaliplatin in combination with capecitabine, or a regimen of oxaliplatin in combination with leucovorin and 5-fluorouracil.

~~107~~. The method of claim ~~96~~, wherein the regimen of oxaliplatin in combination with capecitabine is the XELOX regimen.

~~118~~. The method of claim ~~96~~, wherein the regimen of oxaliplatin in combination with leucovorin and 5-fluorouracil is the FOLFOX4 regimen.

~~129~~. The method of any one of claims 1-~~118~~, wherein said patient is being co-treated with one or more anti-cancer therapies.

~~1310~~. The method of claim ~~129~~, wherein said anti-cancer therapy is radiation.

~~1411~~. The method of any one of claims 1-~~1310~~, wherein said sample is obtained before neoadjuvant or adjuvant therapy.

~~1512~~. A kit useful for carrying out the method of any one of claims 1-~~1411~~, comprising oligonucleotides or polypeptides capable of determining the expression level of ~~one or more of~~ VEGFA~~, HER2 and neuropilin~~.

~~1613~~. Use of an oligonucleotide or polypeptide for determining the expression level of ~~one or more of~~ VEGFA~~, HER2 and neuropilin~~ in any one of claims 1-~~1411~~.

~~1714~~. The kit of claim ~~15~~-12 or the use of claim ~~16~~-13 comprising a polypeptide capable of determining the expression level of ~~one or more of~~ VEGFA~~, HER2 and neuropilin~~,

wherein said polypeptide is suitable for use in an immunohistochemical method and/or is an antibody specific for VEGFA~~, HER2, or neuropilin~~.

~~18. Use of bevacizumab for improving progression-free survival of a patient suffering from metastatic colorectal cancer comprising the following steps:~~

~~(a) determining the expression level of one or more of VEGFA, HER2 and neuropilin in a sample that had been obtained from said patient; and~~

~~(b) adding bevacizumab to a chemotherapy regimen for the patient having an increased level of VEGFA, and/or a decreased level of HER2 and/or neuropilin relative to control levels determined in patients diagnosed with metastatic colorectal cancer.~~