CLAIMS

1. A cancer evaluation method comprising:

the correlation operating step of operating a correlation among concentrations of a set of evaluation elements contained in a serum obtained from a subject by applying concentration data of the set of evaluation elements to a discriminant function for discriminating which of a case group and a control group the subject belongs to; and

the discriminating step of discriminating whether or not the subject suffers from any type of cancer based on the correlation operated in the correlation operating step;

wherein as the set of evaluation elements, a combination of 7 elements of S, P, Mg, Zn, Cu, Ti, and Rb is chosen.

2. A cancer evaluation method comprising:

the correlation operating step of operating a correlation among concentrations of a set of evaluation elements contained in a serum obtained from a subject by applying concentration data of the set of evaluation elements to a discriminant function for discriminating which of a case group and a control group the subject belongs to; and

the discriminating step of discriminating whether or

not the subject suffers from any type of cancer based on the correlation operated in the correlation operating step;

wherein as the set of evaluation elements, a combination of 16 elements of Na, Mg, Al, P, K, Ca, Ti, Mn, Fe, Zn, Cu, Se, Rb, Ag, Sn, and S is chosen.

3. The cancer evaluation method according to claim 1, wherein as the set of evaluation elements, a combination of elements are chosen such that Mahalanobis' generalized distance pertaining to the elements having their concentration data is maximized.

4. The cancer evaluation method according to claim 1 or 2, wherein as the set of evaluation elements, a combination of elements are chosen such that the elements have their concentration data for a subject who belongs to the control group and a subject who belong to the case group.

5. The cancer evaluation method according to any one of claims 1 to 4, wherein in the step of operating a correlation, age data of the subject is used in addition to the concentration data.

6. The cancer evaluation method according to any one of

claims 1 to 5, further comprising the step of analyzing using a multiple logistic model, wherein a probability that the subject will suffer from any type of cancer in his/her future is presented.

7. The cancer evaluation method according to any one of claims 1 to 6, wherein in addition to discrimination whether or not the subject suffers from any type of cancer, discrimination of which type of cancer the subject has suffered from is carried out.

8. A cancer evaluation system comprising:

a data storage section for storing concentration data of a set of evaluation elements contained in a serum which is taken from a subject;

a discriminant function generation section for generating a discriminant function for discriminating which of a case group and a control group the subject belongs to; and

an evaluation result operation section for operating a correlation among concentrations of the set of evaluation elements contained in the serum by applying the concentration data of the subject stored in the data storage section to the discriminant function generated by the discriminant function generation section, thereby outputting an evaluation result

that discriminates whether or not the subject suffers from any type of cancer based on the correlation;

wherein as the set of evaluation elements, a combination of 7 elements of S, P, Mg, Zn, Cu, Ti, and Rb is chosen.

9. A cancer evaluation system comprising:

a data storage section for storing concentration data of a set of evaluation elements contained in a serum which is taken from a subject;

a discriminant function generation section for generating a discriminant function for discriminating which of a case group and a control group the subject belongs to; and

an evaluation result operation section for operating a correlation among concentrations of the set of evaluation elements contained in the serum by applying the concentration data of the subject stored in the data storage section to the discriminant function generated by the discriminant function generation section, thereby outputting an evaluation result that discriminates whether or not the subject suffers from any type of cancer based on the correlation;

wherein as the set of evaluation elements, a combination of 16 elements of Na, Mg, Al, P, K, Ca, Ti, Mn, Fe, Zn, Cu, Se, Rb, Ag, Sn, and S is chosen.

10. The cancer evaluation system according to claim 8 or 9, wherein as the set of evaluation elements, a combination of elements are chosen such that Mahalanobis' generalized distance pertaining to the elements having their concentration data is maximized.

11. The cancer evaluation system according to claim 8 or 9, wherein as the set of evaluation elements, a combination of elements are chosen such that the elements have their concentration data for a subject who belongs to the control group and a subject who belong to the case group.

12. The cancer evaluation system according to any one of claims 8 to 11, wherein in the evaluation result operation section, age data of the subject is used in addition to the concentration data.

13. The cancer evaluation system according to any one of claims 8 to 12, wherein the evaluation result operation section analyzes using a multiple logistic model, thereby adding a probability that the subject will suffer from any type of cancer in his/her future to the evaluation result..

14. The cancer evaluation system according to any one of

claims 8 to 13, wherein the evaluation result operation section has a function of discriminating a type of cancer that has occurred in addition to a function of discriminating which of the control group and the case group the subject belongs to.