# FIG. 9 EXAMPLE 2 (PROSTATE CANCER, MALE)

## ②PROSTATE CANCER AND CONTROL

TABLE 11

| STATISTICAL DATA | n | % |
|---|---|---|
| CONTROL | 364 | 79.48% |
| PROSTATE CANCER | 94 | 20.52% |
| TOTAL | 458 | 100.00% |

TABLE 12

FUNDAMENTAL STATISTICS

| OBJECTIVE VARIABLE | VARIABLE | n | MEAN | UNBIASED VARIANCE | STANDARD DEVIATION | MINIMUM | MAXIMUM |
|---|---|---|---|---|---|---|---|
| CONTROL | AGE | 364 | 61.360 | 100.281 | 10.014 | 30.000 | 75.000 |
| | Na[ppm] | 364 | 3344.564 | 18955.992 | 137.681 | 3080.800 | 3923.920 |
| | Mg[ppm] | 364 | 21.779 | 3.105 | 1.762 | 16.335 | 27.331 |
| | P[ppm] | 364 | 124.503 | 227.310 | 15.077 | 89.141 | 174.475 |
| | S[ppm] | 364 | 1173.032 | 6899.872 | 83.065 | 958.591 | 1579.547 |
| | K[ppm] | 364 | 177.355 | 255.223 | 15.976 | 129.798 | 258.005 |
| | Ca[ppm] | 364 | 98.214 | 36.603 | 6.050 | 78.310 | 124.278 |
| | Fe[ppb] | 364 | 1072.490 | 117801.352 | 343.222 | 288.039 | 2664.570 |
| | Cu[ppb] | 364 | 907.634 | 22419.414 | 149.731 | 551.814 | 1567.016 |
| | Zn[ppb] | 364 | 776.736 | 14247.297 | 119.362 | 539.554 | 1344.875 |
| | As[ppb] | 364 | 3.548 | 6.419 | 2.533 | 0.351 | 17.053 |
| | Sr[ppb] | 364 | 35.049 | 146.967 | 12.123 | 15.112 | 101.955 |
| | Rb[ppb] | 364 | 177.180 | 1138.239 | 33.738 | 90.736 | 328.403 |
| | Se[ppb] | 364 | 151.910 | 396.427 | 19.910 | 107.837 | 277.093 |
| | Mo[ppb] | 364 | 1.753 | 1.592 | 1.262 | 0.371 | 15.379 |
| | Cs[ppb] | 364 | 0.793 | 0.056 | 0.237 | 0.331 | 1.882 |
| | Co[ppb] | 364 | 0.109 | 0.006 | 0.081 | 0.046 | 0.893 |
| | Ag[ppb] | 364 | 0.367 | 0.257 | 0.507 | 0.007 | 5.983 |
| PROSTATE CANCER | AGE | 94 | 105.616 | 11999.988 | 109.544 | 39.420 | 468.000 |
| | Na[ppm] | 94 | 3321.671 | 24571.776 | 156.754 | 2780.868 | 3741.222 |
| | Mg[ppm] | 94 | 21.083 | 3.543 | 1.882 | 15.051 | 25.900 |
| | P[ppm] | 94 | 111.717 | 223.902 | 14.963 | 86.992 | 169.307 |
| | S[ppm] | 94 | 1046.699 | 6740.148 | 82.098 | 803.718 | 1264.607 |
| | K[ppm] | 94 | 177.036 | 653.366 | 25.561 | 122.828 | 231.518 |
| | Ca[ppm] | 94 | 92.604 | 93.371 | 9.663 | 71.431 | 108.346 |
| | Fe[ppb] | 94 | 1264.992 | 237661.111 | 487.505 | 454.327 | 3060.553 |
| | Cu[ppb] | 94 | 865.259 | 33335.359 | 182.580 | 529.146 | 1738.518 |
| | Zn[ppb] | 94 | 713.266 | 11713.833 | 108.230 | 420.396 | 1006.582 |
| | As[ppb] | 94 | 4.198 | 15.311 | 3.913 | 0.936 | 33.124 |
| | Sr[ppb] | 94 | 30.977 | 89.655 | 9.469 | 16.933 | 60.791 |
| | Rb[ppb] | 94 | 161.896 | 1114.683 | 33.387 | 88.042 | 263.321 |
| | Se[ppb] | 94 | 142.768 | 407.743 | 20.193 | 99.067 | 210.954 |
| | Mo[ppb] | 94 | 1.514 | 0.521 | 0.722 | 0.442 | 4.669 |
| | Cs[ppb] | 94 | 0.695 | 0.034 | 0.183 | 0.313 | 1.236 |
| | Co[ppb] | 94 | 0.110 | 0.003 | 0.052 | 0.047 | 0.338 |
| | Ag[ppb] | 94 | 0.584 | 3.328 | 1.824 | 0.028 | 16.967 |

# FIG. 12 EXAMPLE 3 (COLORECTAL CANCER, MALE)

## ③COLORECTAL CANCER AND CONTROL

TABLE 21

| STATISTICAL DATA | n | % |
|---|---|---|
| CONTROL | 364 | 67.66% |
| COLORECTAL CANCER | 174 | 32.34% |
| TOTAL | 538 | 100.00% |

TABLE 22

FUNDAMENTAL STATISTICS

| OBJECTIVE VARIABALE | VARIABLE | n | MEAN | UNBIASED VARIANCE | STANDARD DEVIATION | MINIMUM | MAXIMUM |
|---|---|---|---|---|---|---|---|
| CONTROL | AGE | 364 | 61.360 | 100.281 | 10.014 | 30.000 | 75.000 |
| | Na[ppm] | 364 | 3344.564 | 18955.992 | 137.681 | 3080.800 | 3923.920 |
| | Mg[ppm] | 364 | 21.779 | 3.105 | 1.762 | 16.335 | 27.331 |
| | P[ppm] | 364 | 124.503 | 227.310 | 15.077 | 89.141 | 174.475 |
| | S[ppm] | 364 | 1173.032 | 6899.872 | 83.065 | 958.591 | 1579.547 |
| | K[ppm] | 364 | 177.355 | 255.223 | 15.976 | 129.798 | 258.005 |
| | Ca[ppm] | 364 | 98.214 | 36.603 | 6.050 | 78.310 | 124.278 |
| | Fe[ppb] | 364 | 1072.490 | 117801.352 | 343.222 | 288.039 | 2664.570 |
| | Cu[ppb] | 364 | 907.634 | 22419.414 | 149.731 | 551.814 | 1567.016 |
| | Zn[ppb] | 364 | 776.736 | 14247.297 | 119.362 | 539.554 | 1344.875 |
| | As[ppb] | 364 | 3.548 | 6.419 | 2.533 | 0.351 | 17.053 |
| | Sr[ppb] | 364 | 35.049 | 146.967 | 12.123 | 15.112 | 101.955 |
| | Rb[ppb] | 364 | 177.180 | 1138.239 | 33.738 | 90.736 | 328.403 |
| | Se[ppb] | 364 | 151.910 | 396.427 | 19.910 | 107.837 | 277.093 |
| | Mo[ppb] | 364 | 1.753 | 1.592 | 1.262 | 0.371 | 15.379 |
| | Cs[ppb] | 364 | 0.793 | 0.056 | 0.237 | 0.331 | 1.882 |
| | Co[ppb] | 364 | 0.109 | 0.006 | 0.081 | 0.046 | 0.893 |
| | Ag[ppb] | 364 | 0.367 | 0.257 | 0.507 | 0.007 | 5.983 |
| COLORECTAL CANCER | AGE | 174 | 63.326 | 73.027 | 8.546 | 35.404 | 87.135 |
| | Na[ppm] | 174 | 3262.573 | 36148.378 | 190.127 | 2298.466 | 4118.851 |
| | Mg[ppm] | 174 | 21.337 | 3.992 | 1.998 | 14.225 | 27.782 |
| | P[ppm] | 174 | 109.841 | 204.132 | 14.287 | 76.392 | 155.493 |
| | S[ppm] | 174 | 1025.638 | 10860.222 | 104.212 | 664.698 | 1452.943 |
| | K[ppm] | 174 | 173.695 | 366.199 | 19.136 | 115.528 | 242.765 |
| | Ca[ppm] | 174 | 91.445 | 54.020 | 7.350 | 66.936 | 116.556 |
| | Fe[ppb] | 174 | 963.550 | 324937.985 | 570.033 | 82.105 | 3488.577 |
| | Cu[ppb] | 174 | 1014.948 | 49625.398 | 222.768 | 474.098 | 1728.105 |
| | Zn[ppb] | 174 | 767.968 | 17091.710 | 130.735 | 373.563 | 1124.602 |
| | As[ppb] | 174 | 3.465 | 5.446 | 2.334 | 0.142 | 17.591 |
| | Sr[ppb] | 174 | 33.615 | 144.334 | 12.014 | 15.367 | 97.650 |
| | Rb[ppb] | 174 | 163.923 | 1335.797 | 36.549 | 75.327 | 367.643 |
| | Se[ppb] | 174 | 142.620 | 593.554 | 24.363 | 38.551 | 221.766 |
| | Mo[ppb] | 174 | 1.282 | 0.332 | 0.576 | 0.219 | 4.860 |
| | Cs[ppb] | 174 | 0.731 | 0.045 | 0.213 | 0.216 | 1.797 |
| | Co[ppb] | 174 | 0.218 | 0.038 | 0.194 | 0.049 | 1.168 |
| | Ag[ppb] | 174 | 0.449 | 0.381 | 0.617 | 0.009 | 6.054 |

# FIG. 15 EXAMPLE 4 (ENDOMETRIAL CANCER, FEMALE)

## ④ENDOMETRIAL CANCER AND CONTROL

TABLE 31

| STATISTICAL DATA | n | % |
|---|---|---|
| CONTROL | 248 | 61.54% |
| ENDOMETRIAL CANCER | 155 | 38.46% |
| TOTAL | 403 | 100.00% |

TABLE 32

FUNDAMENTAL STATISTICS

| OBJECTIVE VARIABLE | VARIABLE | n | MEAN | UNBIASED VARIANCE | STANDARD DEVIATION | MINIMUM | MAXIMUM |
|---|---|---|---|---|---|---|---|
| CONTROL | AGE | 248 | 52.702 | 130.728 | 11.434 | 30.000 | 70.000 |
| | Na[ppm] | 248 | 3345.250 | 21624.906 | 147.054 | 2931.025 | 3865.949 |
| | Mg[ppm] | 248 | 22.428 | 2.943 | 1.715 | 17.369 | 27.633 |
| | P[ppm] | 248 | 131.433 | 212.523 | 14.578 | 93.752 | 184.009 |
| | S[ppm] | 248 | 1136.034 | 4613.853 | 67.925 | 950.359 | 1414.263 |
| | K[ppm] | 248 | 174.254 | 218.855 | 14.794 | 134.569 | 235.392 |
| | Ca[ppm] | 248 | 98.745 | 29.529 | 5.434 | 78.869 | 124.393 |
| | Fe[ppb] | 248 | 913.462 | 123191.867 | 350.987 | 80.915 | 2468.603 |
| | Cu[ppb] | 248 | 1007.381 | 22727.952 | 150.758 | 635.642 | 1772.913 |
| | Zn[ppb] | 248 | 792.517 | 12898.719 | 113.573 | 496.980 | 1109.072 |
| | Se[ppb] | 248 | 149.481 | 477.199 | 21.845 | 111.674 | 282.918 |
| | Rb[ppb] | 248 | 175.792 | 866.111 | 29.430 | 95.505 | 268.300 |
| | Sr[ppb] | 248 | 31.840 | 80.094 | 8.950 | 13.440 | 79.124 |
| | As[ppb] | 248 | 2.876 | 7.313 | 2.704 | 0.279 | 27.591 |
| | Mo[ppb] | 248 | 1.416 | 0.606 | 0.779 | 0.319 | 5.208 |
| | Cs[ppb] | 248 | 0.826 | 0.054 | 0.233 | 0.398 | 2.014 |
| | Co[ppb] | 248 | 0.201 | 0.081 | 0.284 | 0.025 | 3.504 |
| | Ag[ppb] | 248 | 0.440 | 0.189 | 0.434 | 0.025 | 2.745 |
| ENDOMETRIAL CANCER | AGE | 155 | 59.994 | 103.201 | 10.159 | 34.000 | 84.000 |
| | Na[ppm] | 155 | 3243.595 | 9650.339 | 98.236 | 2963.369 | 3608.707 |
| | Mg[ppm] | 155 | 20.971 | 2.545 | 1.595 | 16.910 | 24.981 |
| | P[ppm] | 155 | 121.090 | 182.516 | 13.510 | 84.165 | 164.762 |
| | S[ppm] | 155 | 1025.570 | 5516.395 | 74.272 | 822.112 | 1233.784 |
| | K[ppm] | 155 | 158.398 | 173.821 | 13.184 | 131.812 | 217.662 |
| | Ca[ppm] | 155 | 94.115 | 32.205 | 5.675 | 79.789 | 120.000 |
| | Fe[ppb] | 155 | 926.482 | 184468.883 | 429.498 | 163.043 | 2735.406 |
| | Cu[ppb] | 155 | 1009.521 | 46342.026 | 215.272 | 228.880 | 1856.322 |
| | Zn[ppb] | 155 | 734.491 | 17893.503 | 133.767 | 347.846 | 1201.938 |
| | Se[ppb] | 155 | 139.125 | 362.584 | 19.042 | 89.107 | 204.675 |
| | Rb[ppb] | 155 | 143.625 | 710.703 | 26.659 | 87.956 | 268.869 |
| | Sr[ppb] | 155 | 31.935 | 94.243 | 9.708 | 14.586 | 64.445 |
| | As[ppb] | 155 | 3.065 | 6.274 | 2.505 | 0.437 | 18.155 |
| | Mo[ppb] | 155 | 1.909 | 0.638 | 0.799 | 0.389 | 5.588 |
| | Cs[ppb] | 155 | 0.661 | 0.042 | 0.204 | 0.291 | 1.618 |
| | Co[ppb] | 155 | 0.200 | 0.045 | 0.212 | 0.055 | 2.124 |
| | Ag[ppb] | 155 | 0.562 | 0.631 | 0.794 | 0.049 | 5.744 |

# FIG. 18 EXAMPLE 5 (BREAST CANCER, FEMALE)

## ⑤BREAST CANCER AND CONTROL

TABLE 41

| STATISTICAL DATA | n | % |
|---|---|---|
| CONTROL | 248 | 61.23% |
| BREAST CANCER | 157 | 38.77% |
| TOTAL | 405 | 100.00% |

TABLE 42

FUNDAMENTAL STATISTICS

| OBJECGTIVE VARIABLE | VARIABLE | n | MEAN | UNBIASED VARIANCE | STANDARD DEVIATION | MINIMUM | MAXIMUM |
|---|---|---|---|---|---|---|---|
| CONTROL | AGE | 248 | 52.702 | 130.728 | 11.434 | 30.000 | 70.000 |
| | Na[ppm] | 248 | 3345.250 | 21624.906 | 147.054 | 2931.025 | 3865.949 |
| | Mg[ppm] | 248 | 22.428 | 2.943 | 1.715 | 17.369 | 27.633 |
| | P[ppm] | 248 | 131.433 | 212.523 | 14.578 | 93.752 | 184.009 |
| | S[ppm] | 248 | 1136.034 | 4613.853 | 67.925 | 950.359 | 1414.263 |
| | K[ppm] | 248 | 174.254 | 218.855 | 14.794 | 134.569 | 235.392 |
| | Ca[ppm] | 248 | 98.745 | 29.529 | 5.434 | 78.869 | 124.393 |
| | Fe[ppb] | 248 | 913.462 | 123191.867 | 350.987 | 80.915 | 2468.603 |
| | Cu[ppb] | 248 | 1007.381 | 22727.952 | 150.758 | 635.642 | 1772.913 |
| | Zn[ppb] | 248 | 792.517 | 12898.719 | 113.573 | 496.980 | 1109.072 |
| | Se[ppb] | 248 | 149.481 | 477.199 | 21.845 | 111.674 | 282.918 |
| | Rb[ppb] | 248 | 175.792 | 866.111 | 29.430 | 95.505 | 268.300 |
| | Sr[ppb] | 248 | 31.840 | 80.094 | 8.950 | 13.440 | 79.124 |
| | As[ppb] | 248 | 2.876 | 7.313 | 2.704 | 0.279 | 27.591 |
| | Mo[ppb] | 248 | 1.416 | 0.606 | 0.779 | 0.319 | 5.208 |
| | Cs[ppb] | 248 | 0.826 | 0.054 | 0.233 | 0.398 | 2.014 |
| | Co[ppb] | 248 | 0.201 | 0.081 | 0.284 | 0.025 | 3.504 |
| | Ag[ppb] | 248 | 0.440 | 0.189 | 0.434 | 0.025 | 2.745 |
| BREAST CANCER | AGE | 157 | 58.352 | 135.134 | 11.625 | 27.319 | 87.710 |
| | Na[ppm] | 157 | 3259.483 | 15406.846 | 124.124 | 2886.890 | 3511.222 |
| | Mg[ppm] | 157 | 21.303 | 2.238 | 1.496 | 17.734 | 25.664 |
| | P[ppm] | 157 | 122.489 | 155.494 | 12.470 | 94.727 | 160.053 |
| | S[ppm] | 157 | 1062.133 | 5358.477 | 73.202 | 859.977 | 1230.381 |
| | K[ppm] | 157 | 174.916 | 3323.744 | 57.652 | 139.628 | 671.430 |
| | Ca[ppm] | 157 | 95.269 | 27.923 | 5.284 | 83.123 | 119.810 |
| | Fe[ppb] | 157 | 1248.891 | 586358.258 | 765.740 | 158.521 | 6656.016 |
| | Cu[ppb] | 157 | 974.892 | 25945.975 | 161.078 | 630.391 | 2004.917 |
| | Zn[ppb] | 157 | 854.041 | 14347.897 | 119.783 | 559.811 | 1231.696 |
| | Se[ppb] | 157 | 147.925 | 633.060 | 25.161 | 111.158 | 364.813 |
| | Rb[ppb] | 157 | 158.716 | 952.202 | 30.858 | 94.532 | 278.563 |
| | Sr[ppb] | 157 | 31.499 | 98.087 | 9.904 | 15.389 | 77.340 |
| | As[ppb] | 157 | 3.233 | 3.313 | 1.820 | 0.643 | 13.813 |
| | Mo[ppb] | 157 | 1.241 | 0.144 | 0.380 | 0.488 | 2.605 |
| | Cs[ppb] | 157 | 0.684 | 0.042 | 0.205 | 0.260 | 1.772 |
| | Co[ppb] | 157 | 0.151 | 0.015 | 0.124 | 0.000 | 0.876 |
| | Ag[ppb] | 157 | 0.512 | 0.320 | 0.565 | 0.045 | 3.621 |

# FIG. 21 EXAMPLE 6 (COLORECTAL CANCER, FEMALE)

## ⑥COLORECTAL CANCER AND CONTROL

TABLE 51

| STATISTICAL DATA | n | % |
|---|---|---|
| CONTROL | 248 | 62.31% |
| COLORECTAL CANCER | 150 | 37.69% |
| TOTAL | 398 | 100.00% |

TABLE 52
FUNDAMENTAL STATISTICS

| OBJECTIVE VARIABLE | VARIABLE | n | MEAN | UNBIASED VARIANCE | STANDARD DEVIATION | MINIMUM | MAXIMUM |
|---|---|---|---|---|---|---|---|
| CONTROL | AGE | 248 | 52.702 | 130.728 | 11.434 | 30.000 | 70.000 |
| | Na[ppm] | 248 | 3345.250 | 21624.906 | 147.054 | 2931.025 | 3865.949 |
| | Mg[ppm] | 248 | 22.428 | 2.943 | 1.715 | 17.369 | 27.633 |
| | P[ppm] | 248 | 131.433 | 212.523 | 14.578 | 93.752 | 184.009 |
| | S[ppm] | 248 | 1136.034 | 4613.853 | 67.925 | 950.359 | 1414.263 |
| | K[ppm] | 248 | 174.254 | 218.855 | 14.794 | 134.569 | 235.392 |
| | Ca[ppm] | 248 | 98.745 | 29.529 | 5.434 | 78.869 | 124.393 |
| | Fe[ppb] | 248 | 913.462 | 123191.867 | 350.987 | 80.915 | 2468.603 |
| | Cu[ppb] | 248 | 1007.381 | 22727.952 | 150.758 | 635.642 | 1772.913 |
| | Zn[ppb] | 248 | 792.517 | 12898.719 | 113.573 | 496.980 | 1109.072 |
| | Se[ppb] | 248 | 149.481 | 477.199 | 21.845 | 111.674 | 282.918 |
| | Rb[ppb] | 248 | 175.792 | 866.111 | 29.430 | 95.505 | 268.300 |
| | Sr[ppb] | 248 | 31.840 | 80.094 | 8.950 | 13.440 | 79.124 |
| | As[ppb] | 248 | 2.876 | 7.313 | 2.704 | 0.279 | 27.591 |
| | Mo[ppb] | 248 | 1.416 | 0.606 | 0.779 | 0.319 | 5.208 |
| | Cs[ppb] | 248 | 0.826 | 0.054 | 0.233 | 0.398 | 2.014 |
| | Co[ppb] | 248 | 0.201 | 0.081 | 0.284 | 0.025 | 3.504 |
| | Ag[ppb] | 248 | 0.440 | 0.189 | 0.434 | 0.025 | 2.745 |
| COLORECTAL CANCER | AGE | 150 | 64.062 | 91.906 | 9.587 | 32.304 | 84.134 |
| | Na[ppm] | 150 | 3421.386 | 17443.712 | 132.075 | 3139.210 | 4008.909 |
| | Mg[ppm] | 150 | 22.782 | 5.380 | 2.319 | 14.698 | 29.098 |
| | P[ppm] | 150 | 123.527 | 223.340 | 14.945 | 79.558 | 171.941 |
| | S[ppm] | 150 | 1069.825 | 9021.091 | 94.979 | 815.302 | 1580.363 |
| | K[ppm] | 150 | 174.074 | 251.421 | 15.856 | 125.838 | 230.514 |
| | Ca[ppm] | 150 | 97.151 | 31.239 | 5.589 | 85.743 | 128.195 |
| | Fe[ppb] | 150 | 949.840 | 217978.072 | 466.881 | 125.507 | 2846.631 |
| | Cu[ppb] | 150 | 1106.018 | 56597.363 | 237.902 | 496.083 | 2107.212 |
| | Zn[ppb] | 150 | 818.594 | 16665.855 | 129.096 | 502.776 | 1366.125 |
| | Se[ppb] | 150 | 148.325 | 531.994 | 23.065 | 59.184 | 261.804 |
| | Rb[ppb] | 150 | 154.315 | 844.454 | 29.059 | 55.925 | 215.412 |
| | Sr[ppb] | 150 | 32.652 | 128.928 | 11.355 | 15.529 | 86.415 |
| | As[ppb] | 150 | 3.929 | 13.207 | 3.634 | 0.198 | 32.780 |
| | Mo[ppb] | 150 | 1.329 | 0.246 | 0.496 | 0.306 | 3.168 |
| | Cs[ppb] | 150 | 0.685 | 0.039 | 0.197 | 0.175 | 1.265 |
| | Co[ppb] | 150 | 0.233 | 0.095 | 0.308 | 0.056 | 3.237 |
| | Ag[ppb] | 150 | 0.652 | 0.713 | 0.844 | 0.069 | 5.805 |

FIG. 26 EXAMPLE 1 (PANCREATIC CANCER, MALE)

