

Appendix A

Appendix A

This Appendix contains a description of each of the results from executing two algorithms (K-means & Two-step) used in the experiments of Chapter 3.

Behavior

- 0 Benign
- 1 Uncertain whether benign or malignant, borderline malignancy, low malignant potential, and uncertain malignant potential
- 2 Carcinoma in situ; intraepithelial; non-infiltrating; noninvasive
- 3 Malignant, primary site

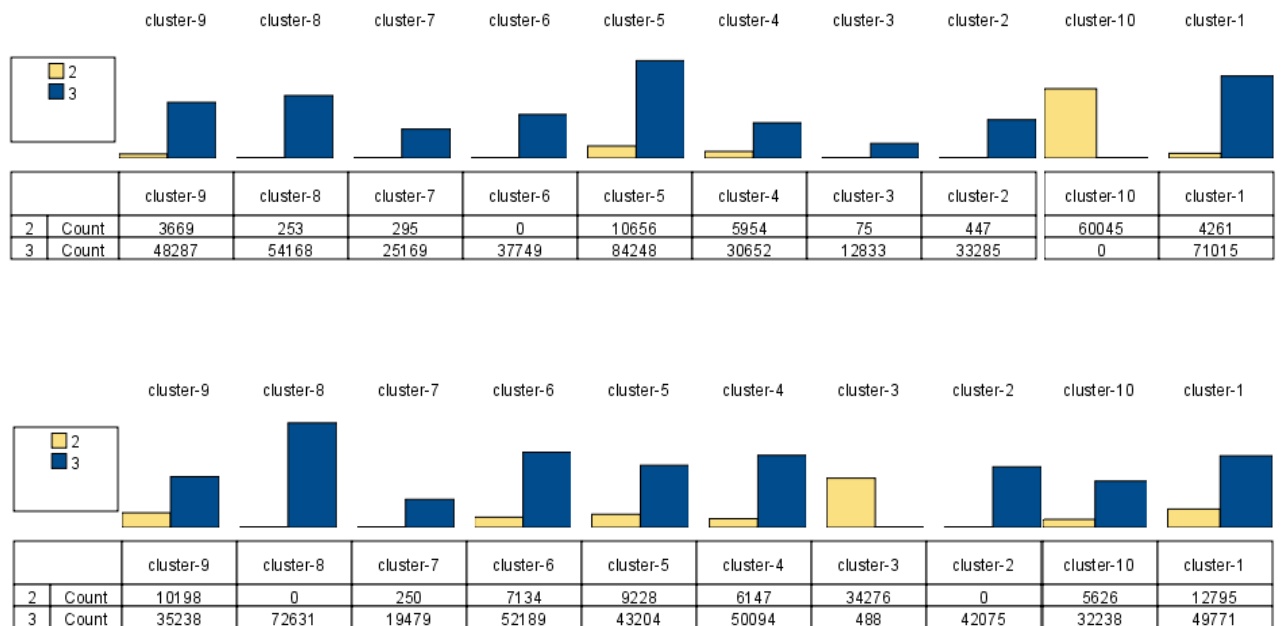


Figure A.1 Result of Behavior for K-means and Two-Step

LATERAL

Laterality describes the side of a paired organ or side of the body on which the reportable tumor originated.

- 0 Not a paired site
- 1 Right: origin of primary
- 2 Left: origin of primary
- 3 Only one side involved, right or left origin unspecified
- 4 Bilateral involvement, lateral origin unknown; stated to be single primary
 - Both ovaries involved simultaneously, single histology
 - Bilateral retinoblastomas
 - Bilateral Wilms's tumors
- 5 Paired site: midline tumor
- 9 Paired site, but no information concerning laterality; midline tumor

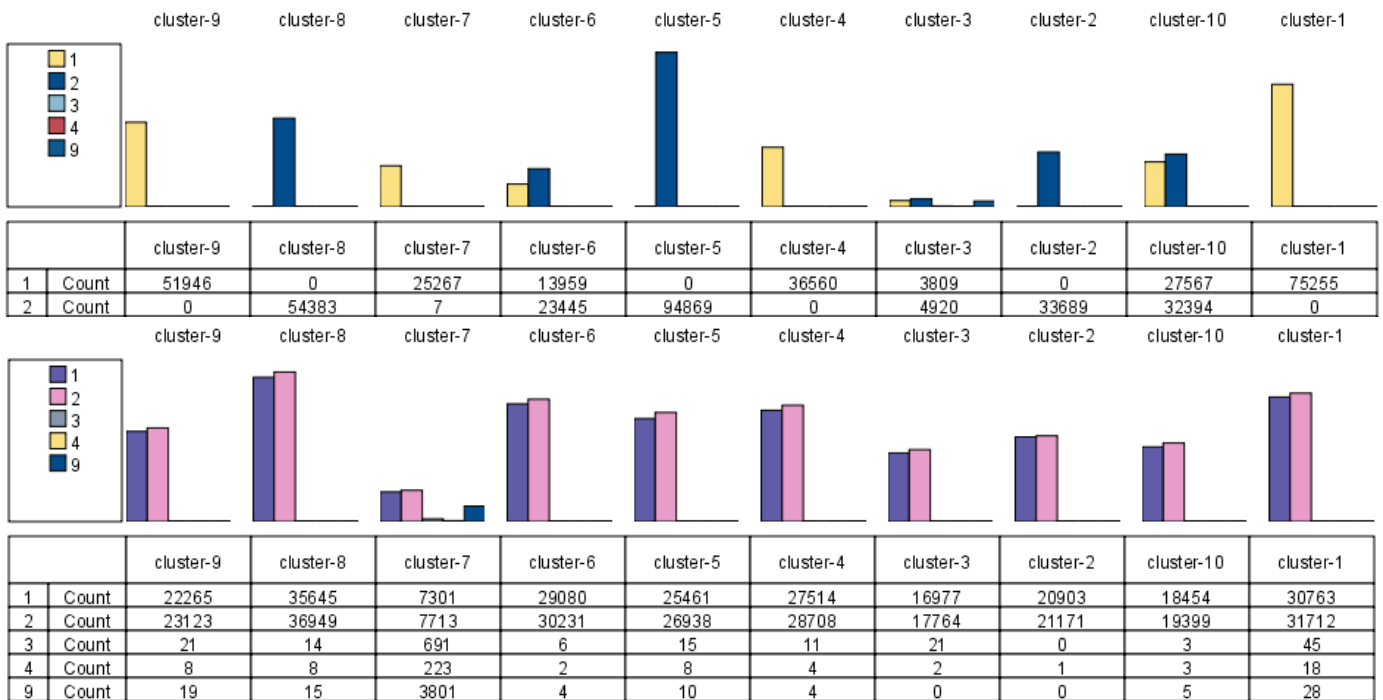


Figure A.2 Result of LATERAL for K-means and Two-Step

Radiation

This data item indicates the method of radiation therapy performed as part of the first course of treatment.

- 0 None; diagnosed at autopsy
- 1 Beam radiation
- 2 Radioactive implants
- 3 Radioisotopes
- 4 Combination of 1 with 2 or 3
- 5 Radiation, NOS – method or source not specified
- 6 Other radiation (1973-1987 cases only)
- 7 Patient or patient’s guardian refused radiation therapy
- 8 Radiation recommended, unknown if administered
- 9 Unknown if radiation administered

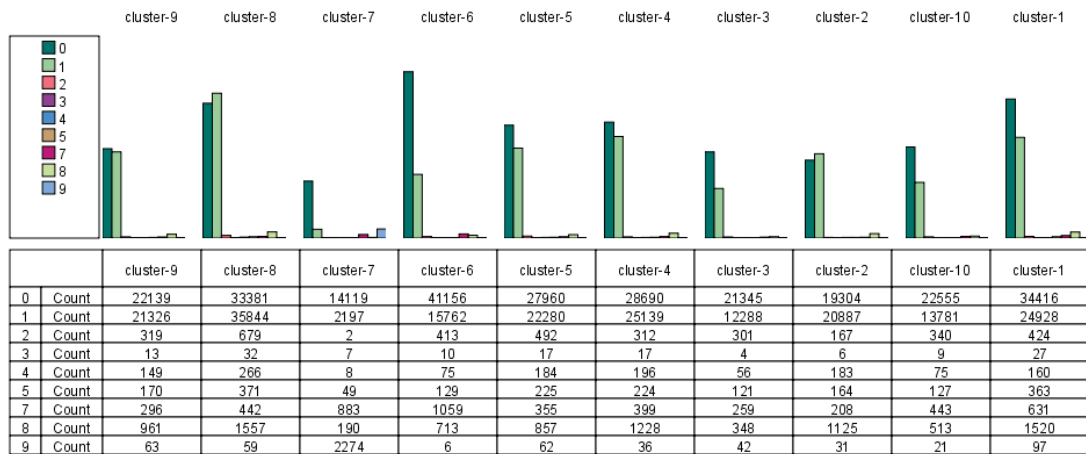
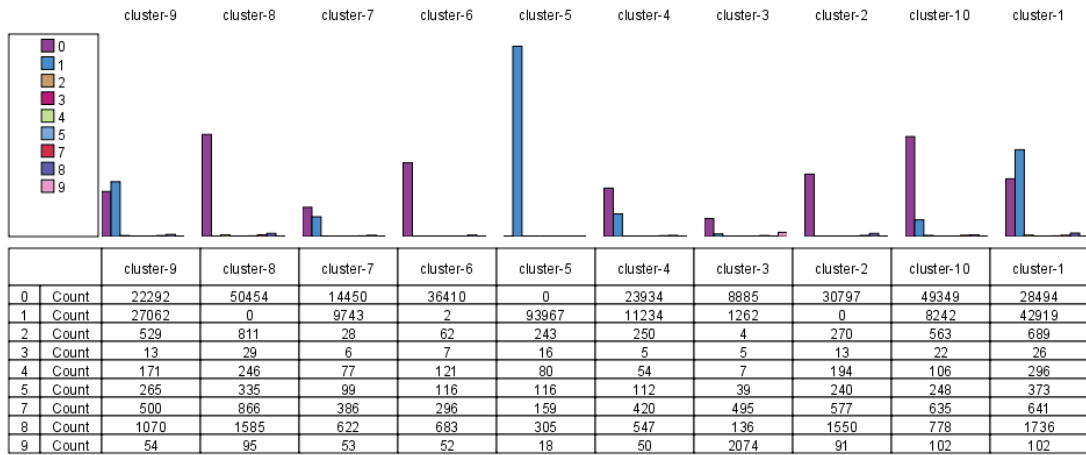


Figure A.3 Result of Radiation for K-means and Two-Step

Death Class

This variable designates that the person died of their cancer.

- 0 Alive or dead of other cause
- 1 Dead
- 9 N/A not first tumor

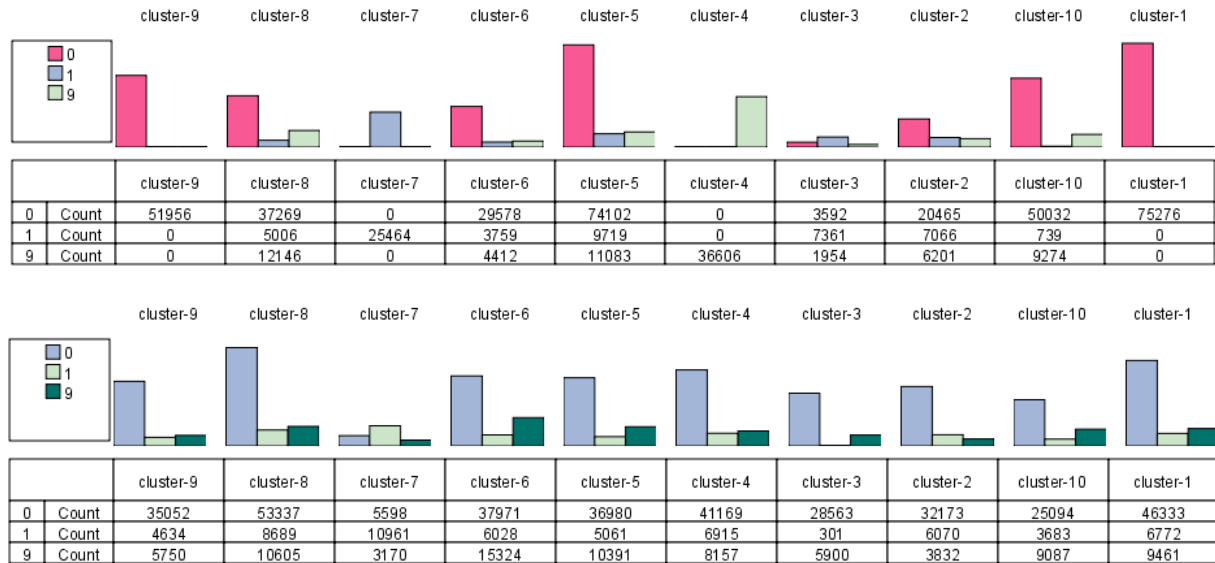


Figure A.4 Result of Death Class for K-means and Two-Step

DIAGNOSTIC CONFIRMATION

This data item records the best method used to confirm the presence of the cancer being reported. The data item is not limited to the confirmation at the time of diagnosis; it is the best method of confirmation during the entire course of the disease.

Microscopically Confirmed

- 1 Positive histology
- 2 Positive cytology
- 4 Positive microscopic confirmation, method not specified

Not Microscopically Confirmed

- 5 Positive laboratory test/marker study
- 6 Direct visualization without microscopic confirmation
- 7 Radiology and other imaging techniques without microscopic confirmation
- 8 Clinical diagnosis only (other than 5, 6, or 7)

Confirmation Unknown

- 9 Unknown whether microscopically confirmed; death certificate only

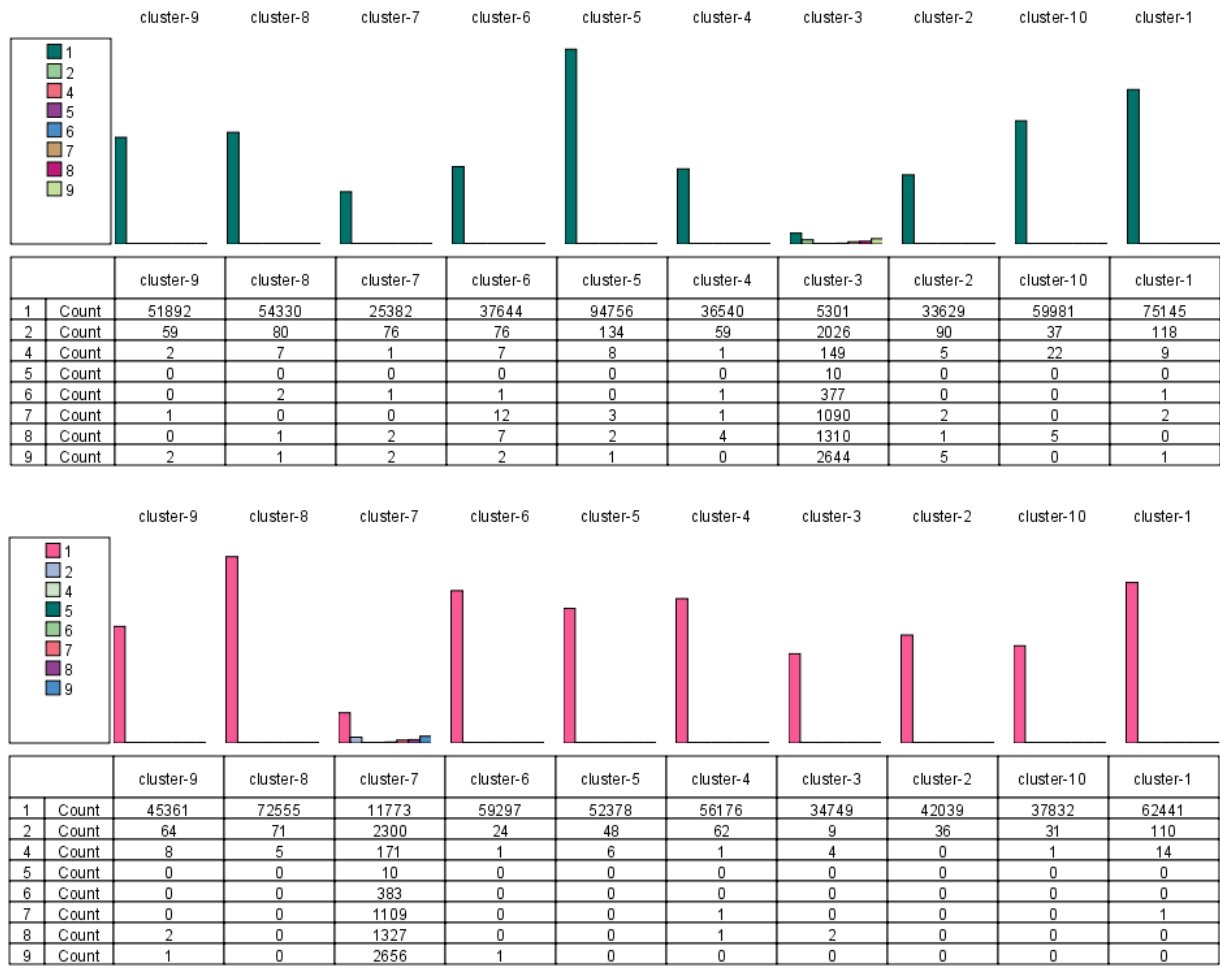


Figure A.5 Result of DIAGNOSTIC CONFIRMATION for K-means and Two-Step

GRADE

- 1 Grade I; grade i; grade 1; well differentiated; differentiated, NOS
- 2 Grade II; grade ii; grade 2; moderately differentiated; moderately differentiated; intermediate differentiation
- 3 Grade III; grade iii; grade 3; poorly differentiated; differentiated
- 4 Grade IV; grade iv; grade 4; undifferentiated; anaplastic
- 5 T-cell; T-precursor
- 6 B-cell; Pre-B; B-Precursor
- 7 Null cell; Non T-non B;
- 8 N K cell (natural killer cell)
- 9 cell type not determined, not stated or not applicable

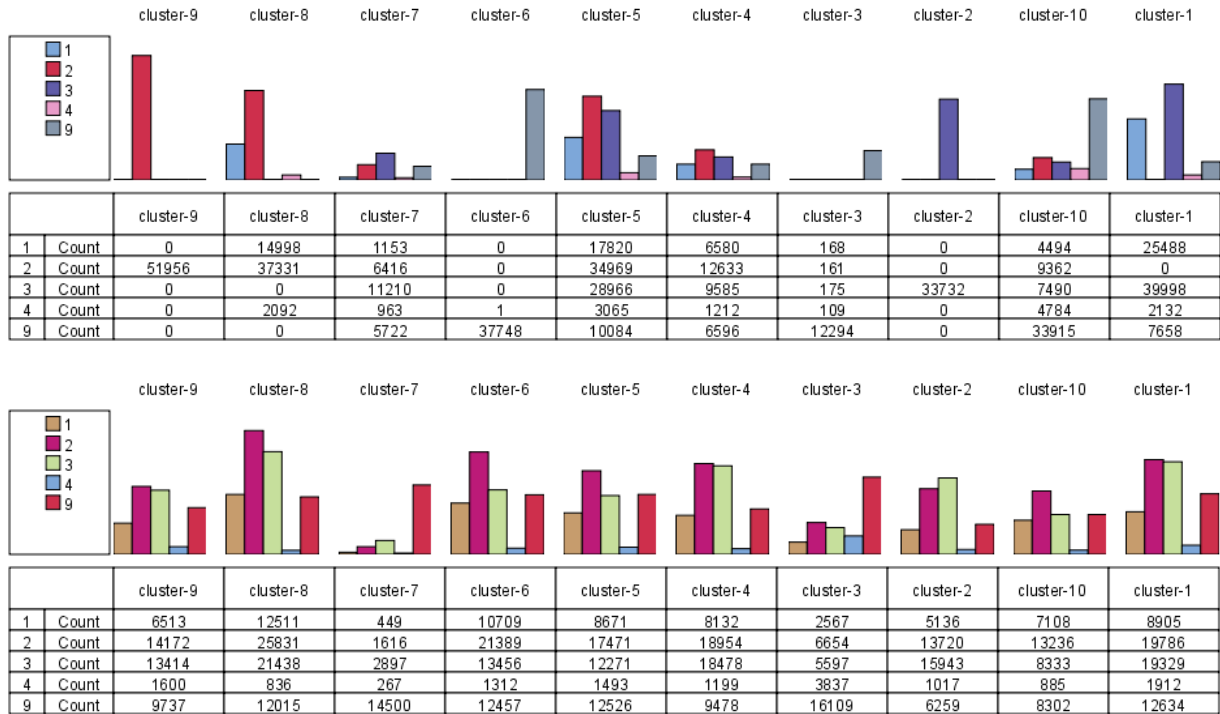


Figure A.6 Result of GRADE for K-means and Two-Step

Marital Status

This data item identifies the patient's marital status at the time of diagnosis for the reportable tumor.

- 1 Single (never married)
- 2 Married (including common law)
- 3 Separated
- 4 Divorced
- 5 Widowed
- 6 Unmarried or domestic partner (same sex or opposite sex or unregistered)
- 9 Unknown

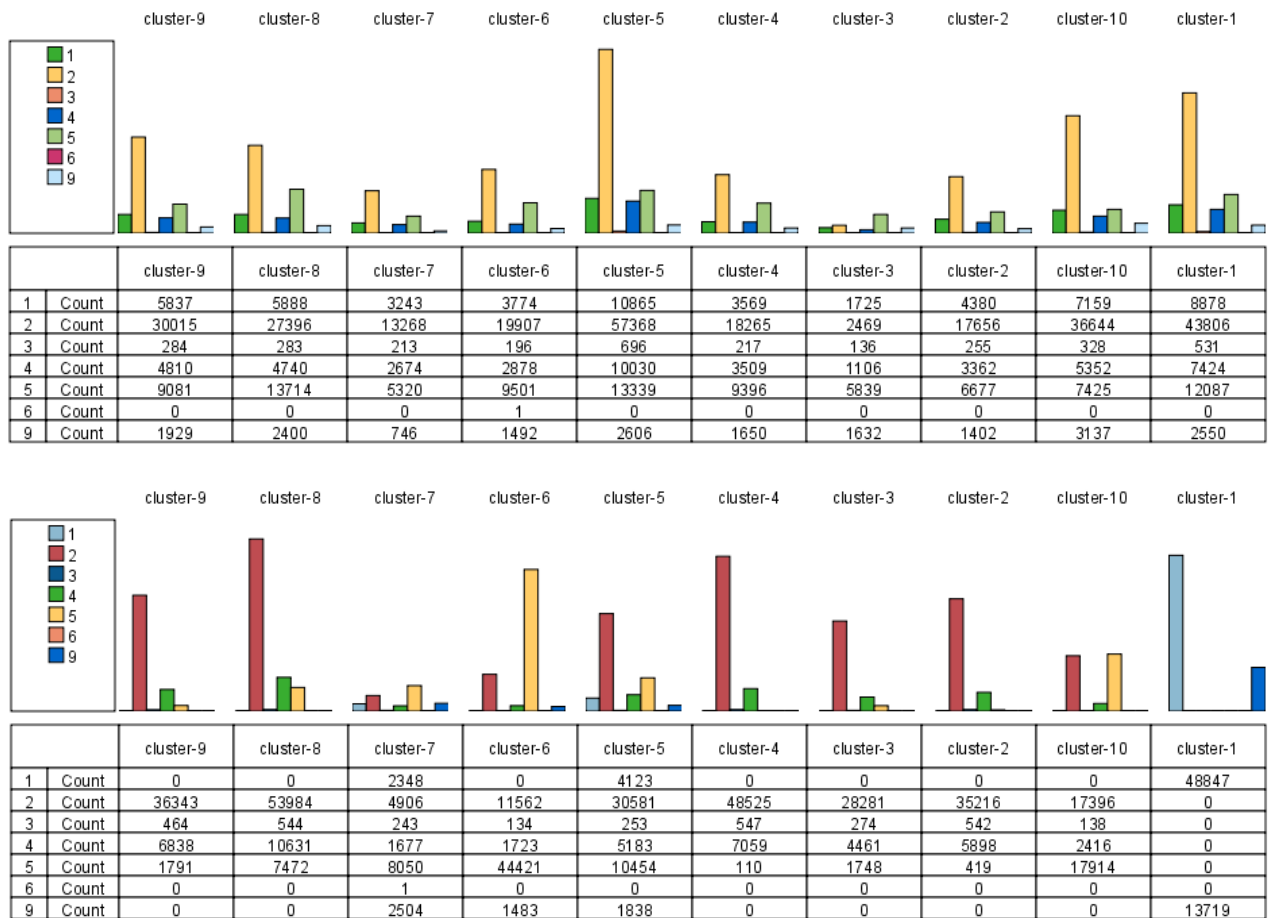


Figure A.7 Result of Marital Status for K-means and Two-Step

Reason for No surgery

This data item documents the reason that surgery was not performed on the primary site.

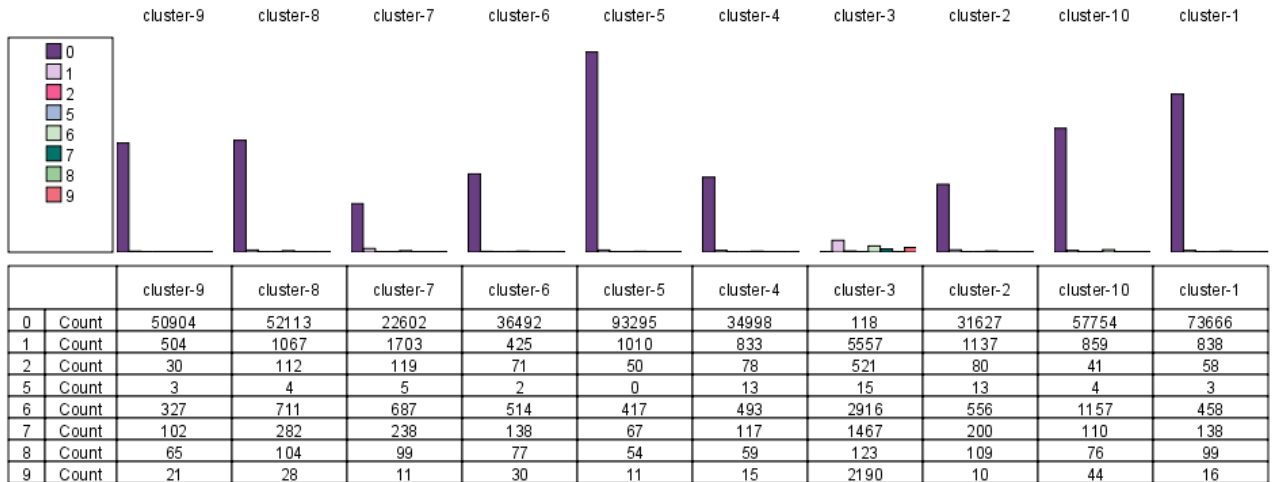
0 Surgery performed

No surgery

- 1 Surgery not recommended
- 2 Contraindicated due to other conditions; Autopsy Only case
- 5 Patient died before recommended surgery
- 6 Unknown reason for no surgery
- 7 Patient or patient's guardian refused

Unknown if surgery performed

- 8 Recommended, unknown if done
- 9 Unknown if surgery performed; Death Certificate Only case



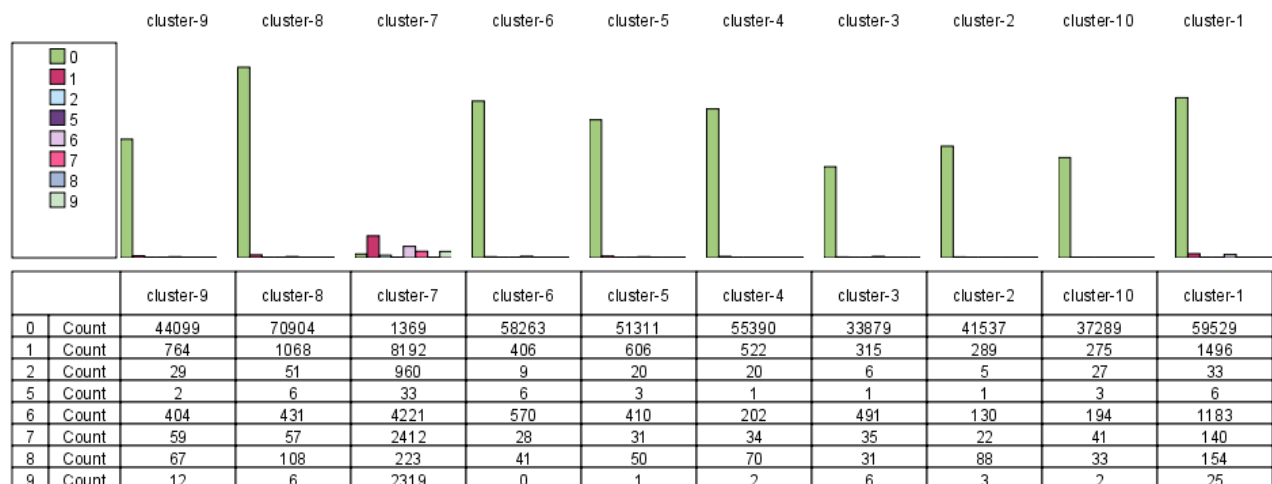


Figure A.8 Result of Reason for No surgery for K-means and Two-Step

Report Source

The Type of Reporting Source identifies the source documents used to abstract the case. This is not necessarily the original document that identified the case; rather, it is the source that provided the best information.

- 1 Hospital inpatient; Managed health plans with comprehensive, unified medical records
- 2 Radiation Treatment Centers or Medical Oncology Centers (hospital-affiliated or independent)
- 3 Laboratory Only (hospital-affiliated or independent)
- 4 Physician's Office/Private Medical Practitioner
- 5 Nursing/Convalescent Home/Hospice
- 6 Autopsy Only
- 7 Death Certificate Only
- 8 Other hospital outpatient units/surgery centers

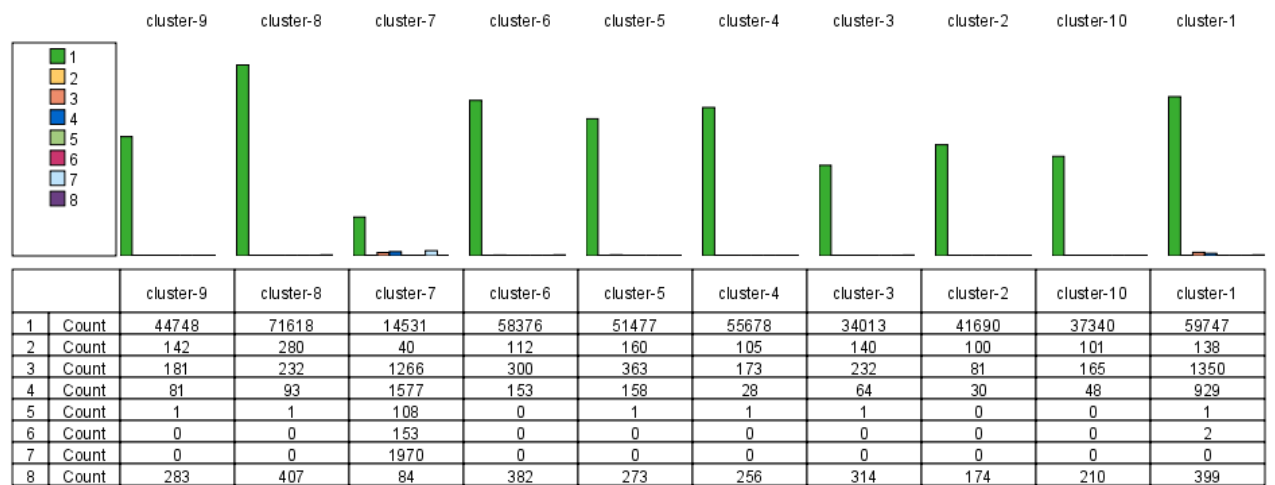
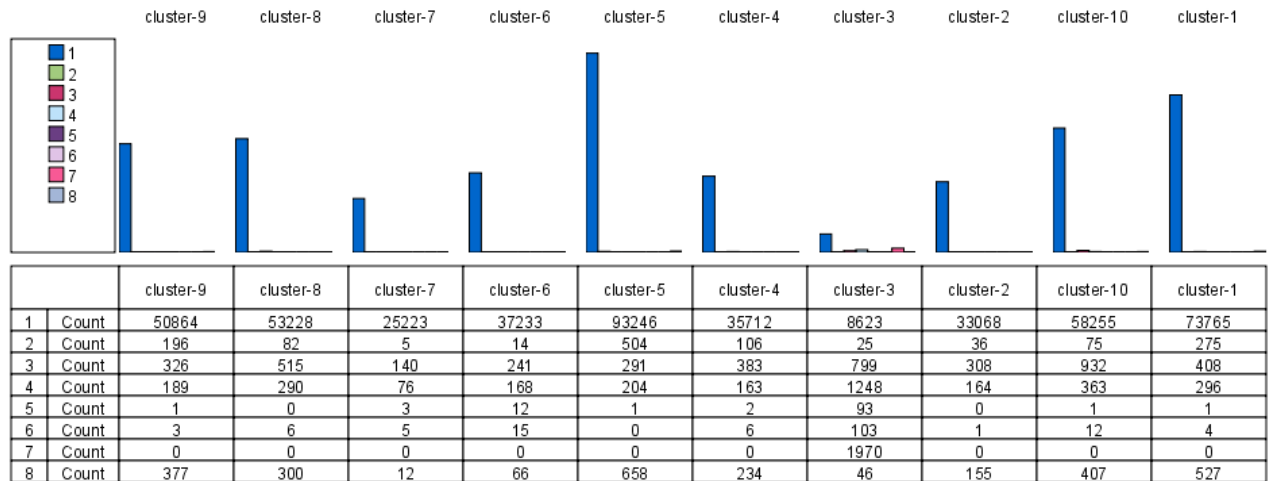


Figure A.9 Result of Report Source for K-means and Two-Step

SEX

This data item identifies the sex of the patient at diagnosis.

- 1 Male
- 2 Female

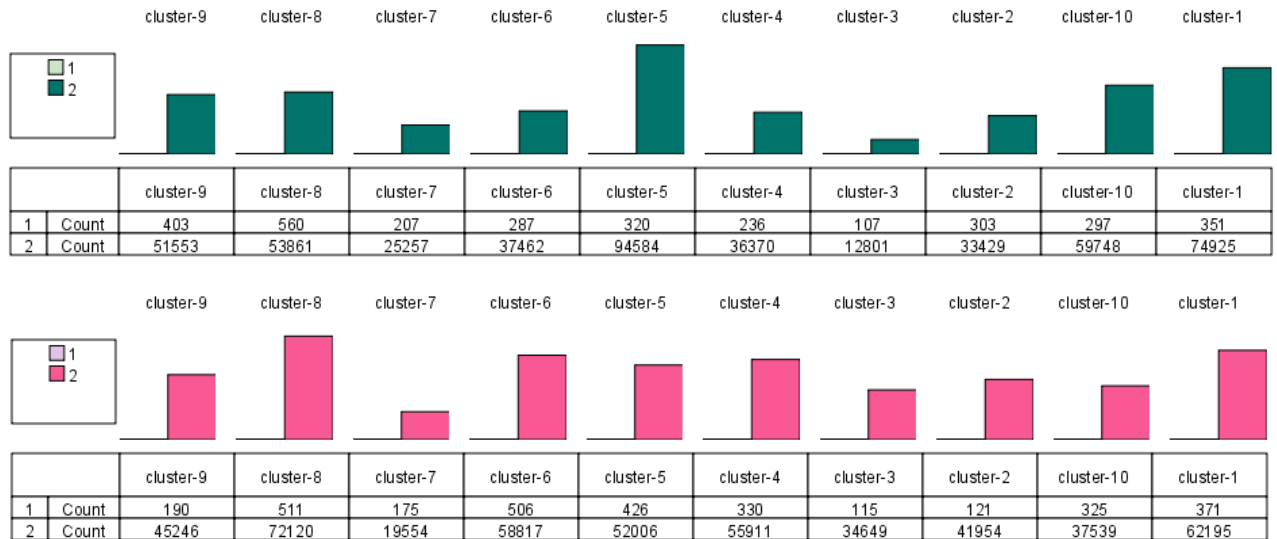


Figure A.10 Result of SEX for K-means and Two-Step

REGISTRATION

A unique code assigned to each participating SEER registry. The number identifies the registry sending the record and what population the data are based on.

0000001501	San Francisco-Oakland SMSA
0000001502	Connecticut
0000001520	Metropolitan Detroit
0000001521	Hawaii
0000001522	Iowa
0000001523	New Mexico
0000001525	Seattle (Puget Sound)
0000001526	Utah
0000001527	Metropolitan Atlanta

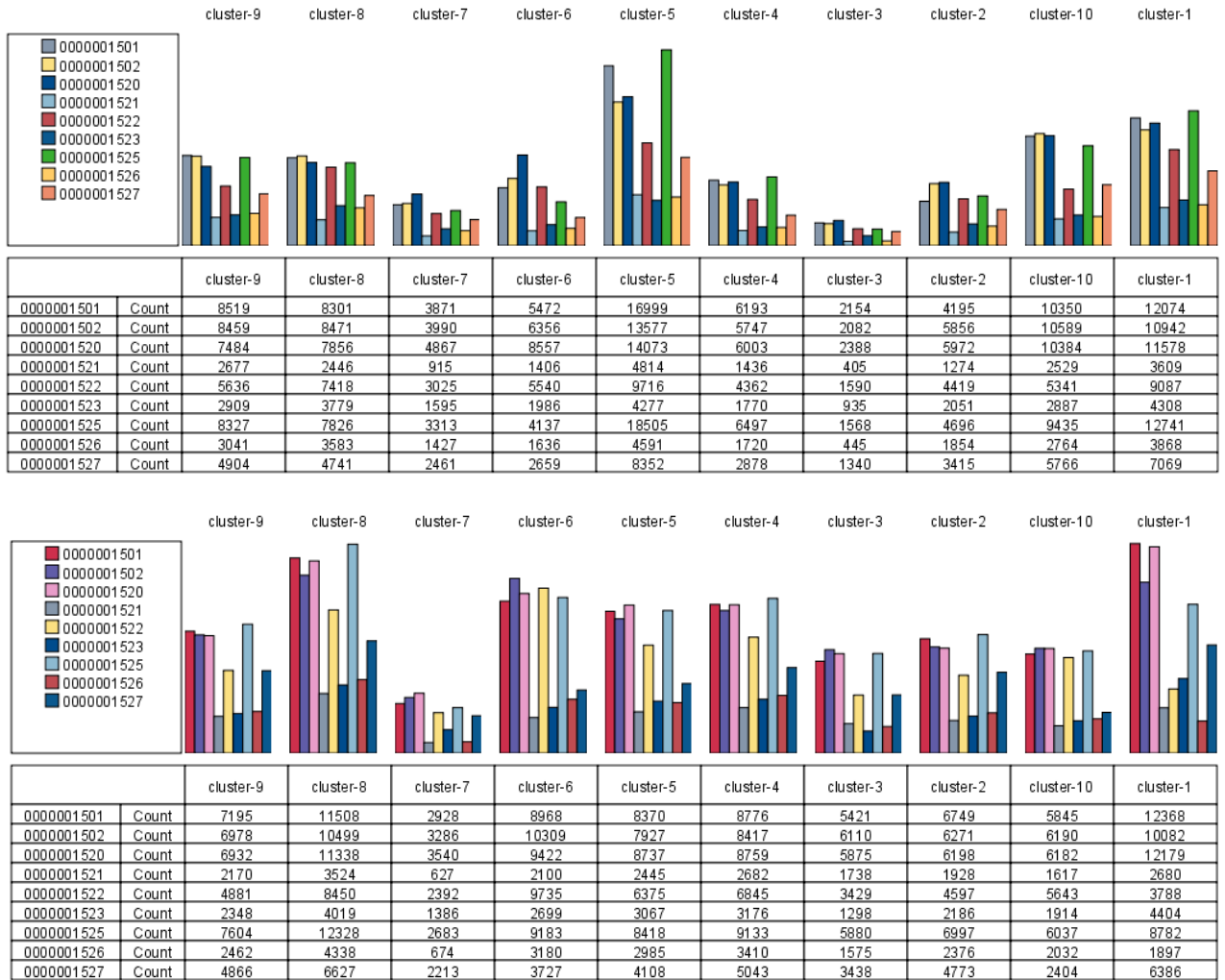


Figure A.11 Result of REGISTRATION for K-means and Two-Step

MONTH OF DIAGNOSIS

The month of diagnosis is the month the tumor was first diagnosed by a recognized medical practitioner, whether clinically or microscopically confirmed. For analysis purposes, months coded to 99 (unknown) have been replaced with values 01 through 12.

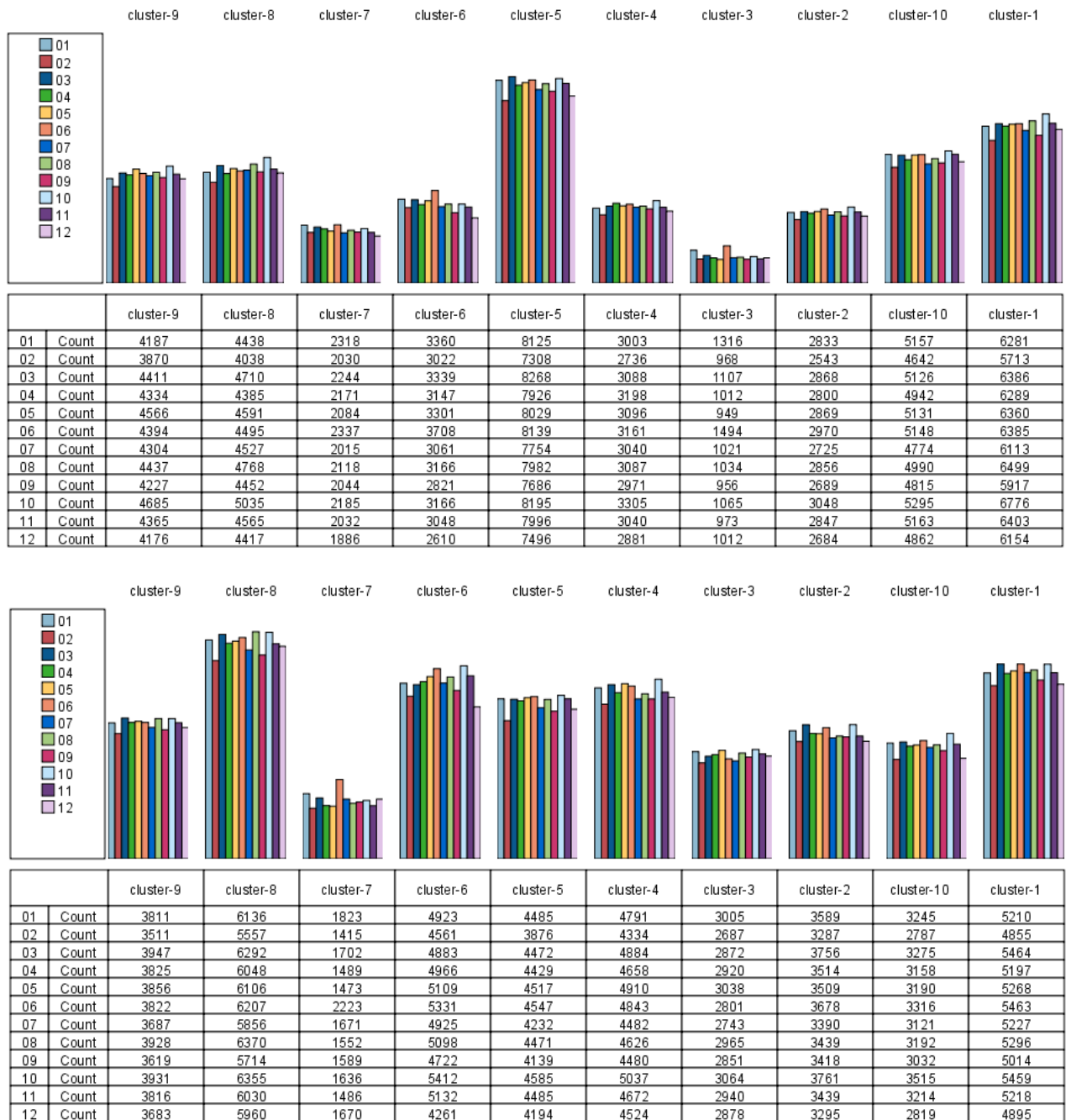


Figure A.12 Result of MONTH OF DIAGNOSIS for K-means and Two-Step

Age Record

The age recode variable is based on Age at Diagnosis (single-year ages). The groupings used in the age recode variable are determined by the age groupings in the population data. This recode has 19 age groups in the age recode variable (< 1 year, 1-4 years, 5-9 years, ..., 85+ years).

00	Age 00
01	Ages 01-04
02	Ages 05-09
03	Ages 10-14
04	Ages 15-19
05	Ages 20-24
06	Ages 25-29
07	Ages 30-34
08	Ages 35-39
09	Ages 40-44
10	Ages 45-49
11	Ages 50-54
12	Ages 55-59
13	Ages 60-64
14	Ages 65-69
15	Ages 70-74
16	Ages 75-79
17	Ages 80-84
18	Ages 85+
99	Unknown Age

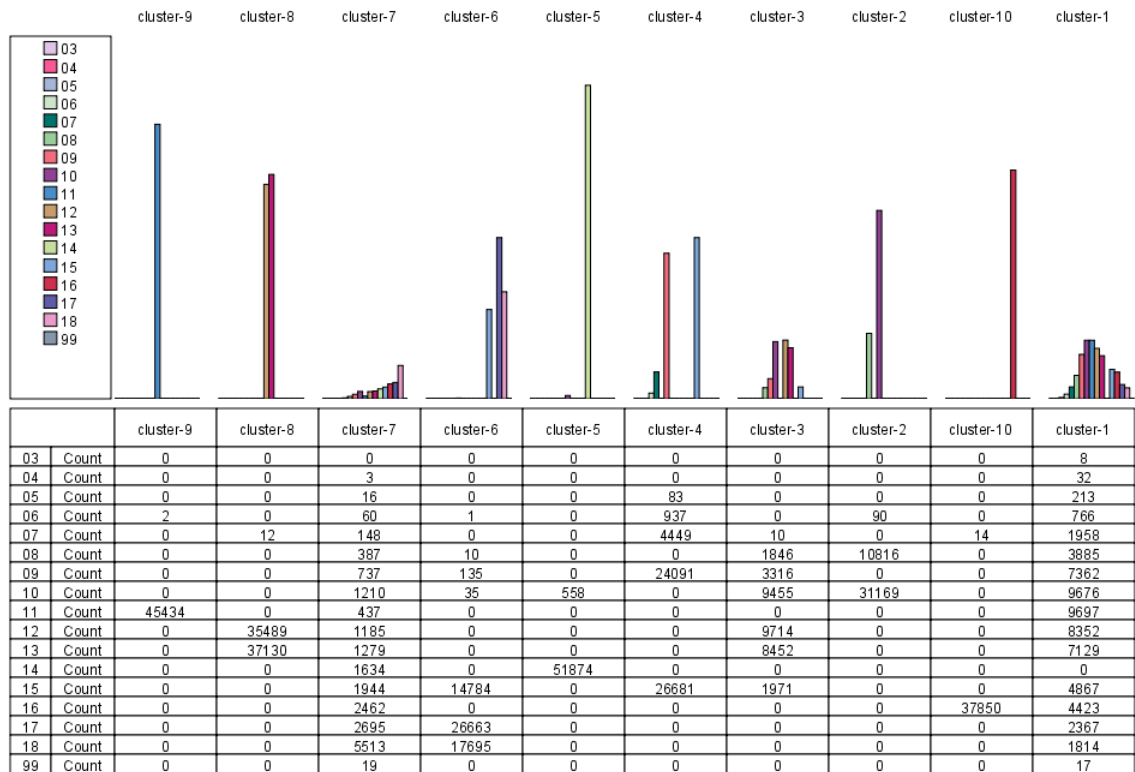
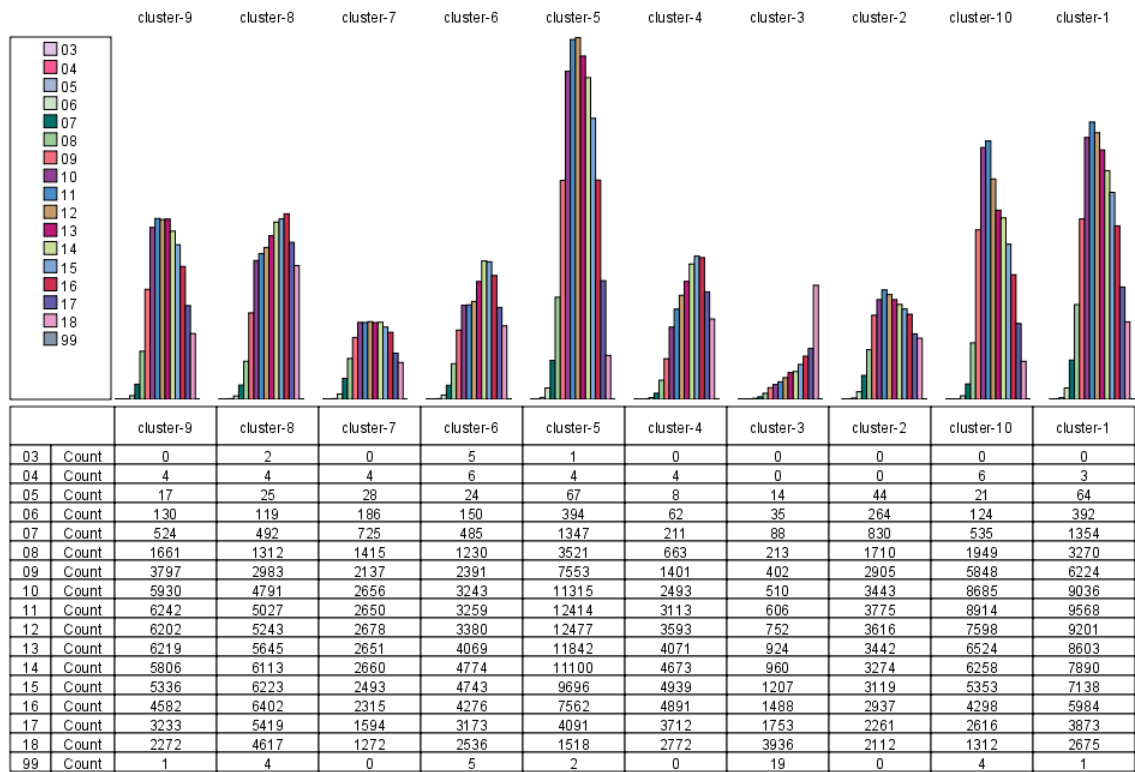


Figure A.13 Result of Age Record for K-means and Two-Step