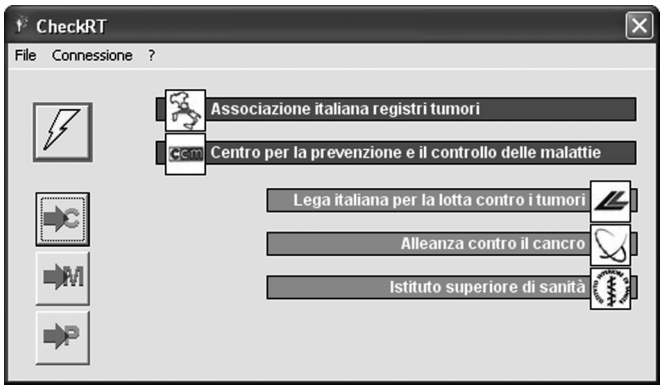
APPENDIX 1

Contents

APPENDIX 1
User's Guide to CheckRT: Software for Quality Control

This section describes the main features of *CheckRT* and their use starting from the main window of the application, which is shown in the following figure:

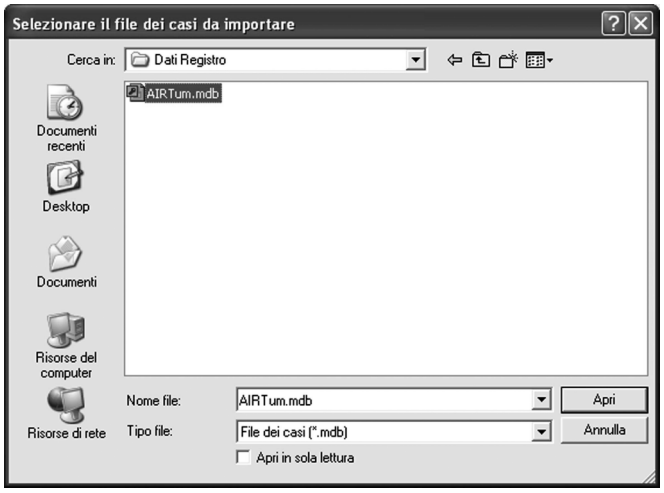


Importing the case file

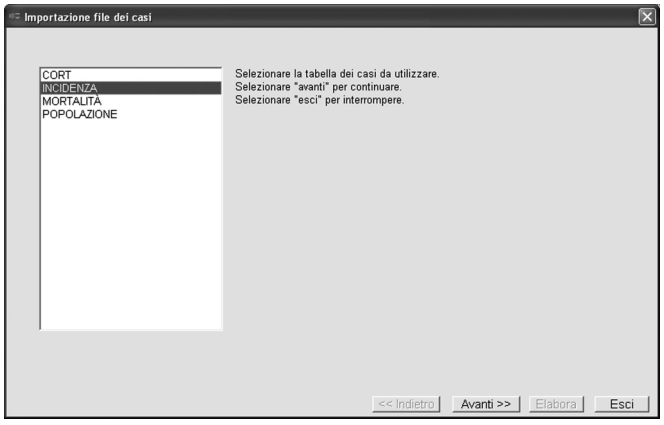
The format required for the import is Microsoft Access (version 97 or higher). The necessary data, which must be included in a single table, are compatible with the protocol of the AIRTUM Database.

- case identifier;
- sex: in M/F or 1/2 format;
- date of birth or age at diagnosis in years;
- date of diagnosis;
- ICD-O-3 topography in Cxx.x or Cxxx format;
- ICD-O-3 morphology in xxxx/3 or xxxx3 format;
- ENCR code for basis of diagnosis: a value between 0 and 9;
- date or months of follow-up;
- life status: in the format: 1) alive, 2) deceased, 3) lost to follow-up.

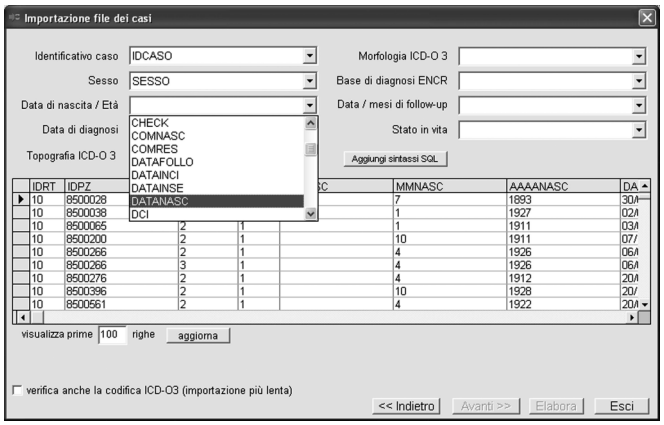
After clicking the  button, you will be prompted to select the file containing the data to import:



Once the file is open, the importing cases window will be displayed:



Please select the table containing the cases and click "Next":



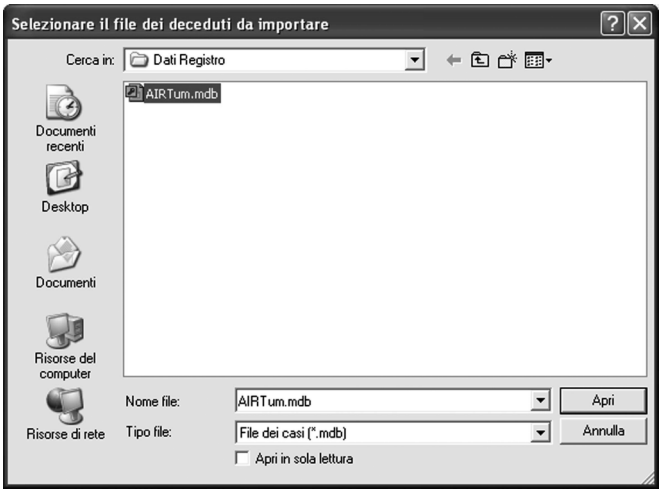
Bind each required variable to the corresponding field in the table. Click "Process" to start the import.

Importing mortality data

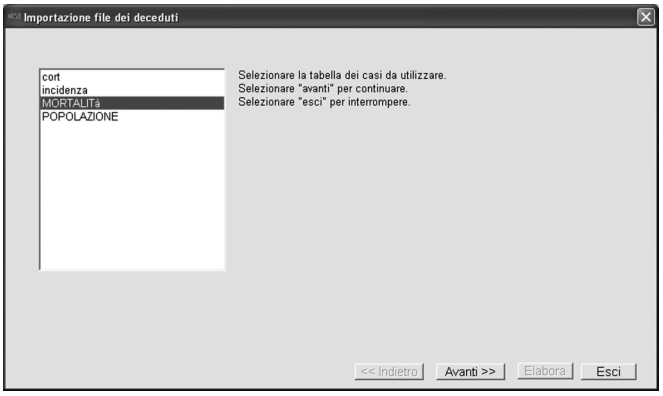
The format required for the import is Microsoft Access (version 97 or higher). The necessary data, which must be included in a single table, are compatible with the protocol of the AIRTUM Database.

- number of cases (if the data is aggregated);
- sex: in M/F or 1/2 format;
- age in years or in 5-year class format (1=0-4, 2=5-9, … 18=85+);
- year or date of death;
- ICD-9 cause of death in four-digit (xxx.x or xxxx) or three-digit (xxx) format.

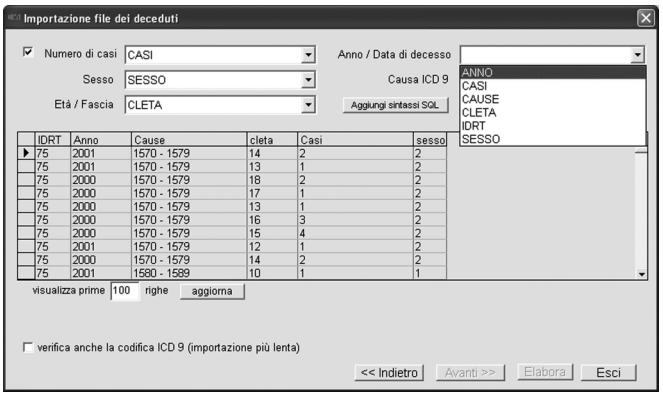
After you click  the button you will be prompted to select the file containing the mortality data to import:



Once the file is open, the importing mortality data window will be displayed:



Please select the table containing the mortality data and click "Next":



Bind each required variable to the appropriate field in the table. Click "Process" to start the import.

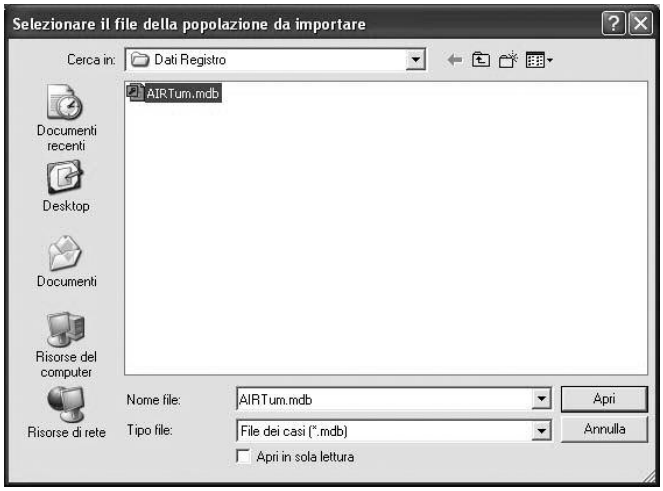
Importing the population

The format required for the import is Microsoft Access (version 97 or higher). The necessary data, which must be included in a single table, are compatible with the protocol of the AIRTUM Database.

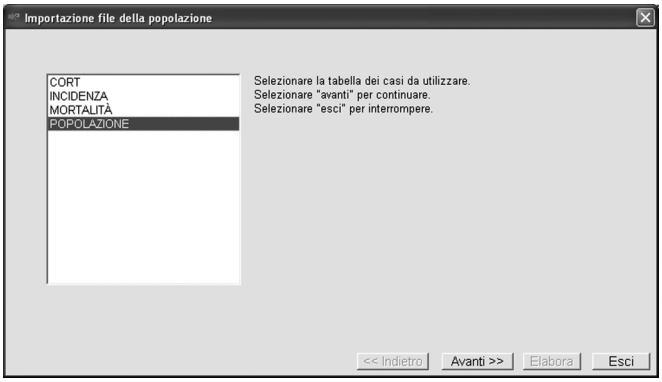
- number of cases;

- sex: in M/F or 1/2 format;
- age in years or in 5-year class format (1=0-4, 2=5-9, … 18=85+);
- reference year.

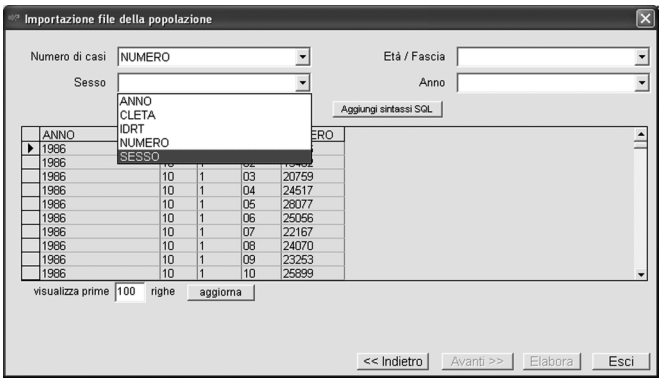
After you click the  button you will be prompted to select the file containing the population to import:



Once the file is open, the importing population window will be displayed:



Please select the table containing the population and click "Next":



Bind each required variable to the appropriate field in the table. Click "Process" to start the import.

Other import features and advanced settings

As a guide, the import windows display a sample of the first 100 records listed in the table.

You can change the number of the displayed lines by changing the reset value in "Display First" and clicking "Update".
In addition, you can filter case records on a condition written in the T-SQL language by clicking "Add SQL syntax".
A few examples of filters are listed below:

Example 1 − Import only those records in which the COMRES field text is 036023:
- SQL syntax: *COMRES = '036023'*

Example 2 − Import only those records in which the COMRES field contains the number 36023:
- SQL syntax: *COMRES = 36023*

Example 3 − Import only those records in which the ETA field contains a number between 0 and 14 and in which the TOPOGRAF field starts with C64:
- SQL syntax: *[(ETA ≥ 0 and ETA ≤ 14) or TOPOGRAF like 'C64%']*

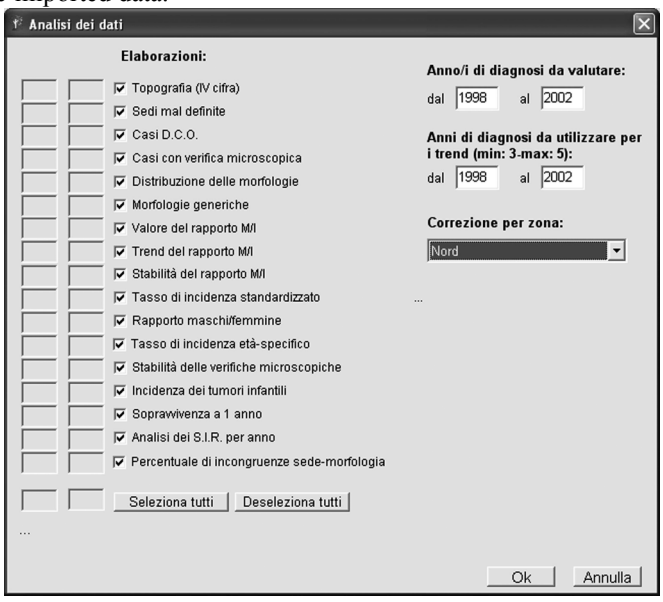
Example 4 − Import only those records in which the DATADIAG field is between 1/1/1999 and 12/31/2001:
- SQL syntax: *DATADIAG ≥ #1/1/1999# and DATADIAG ≤ #31/12/2001#*

or:

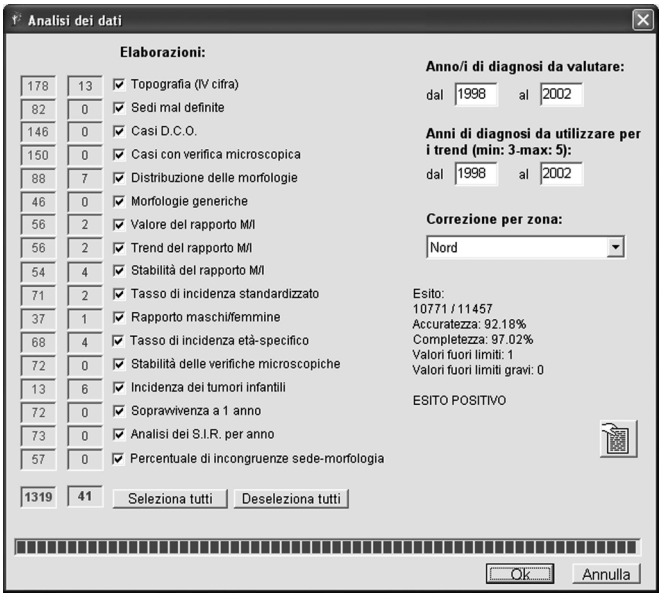
- SQL syntax: *year(DATADIAG) ≥ 1999 and year(DATADIAG) ≤ 2001*

Analyzing the data

Once the three tables containing the case records, mortality, and population  are loaded, click to display the main window and analyze the imported data:



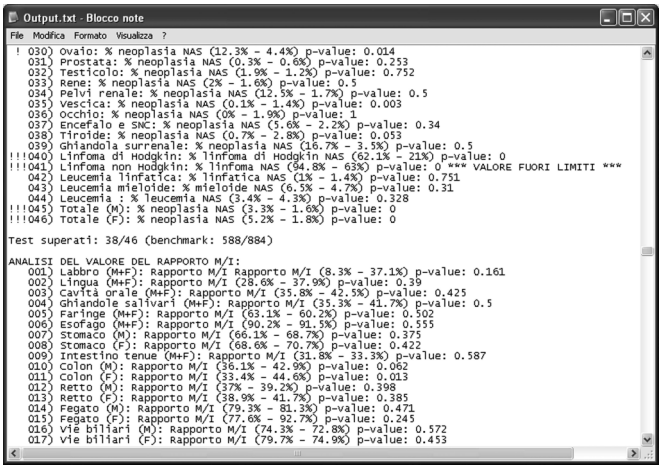
You can clear the controls you do not wish to run by clicking the corresponding check mark. Then, select the year(s) of diagnosis you want to evaluate and the years you want to use for trend calculation. The latter must coincide with, or include, the first period and must include between 3 and 5 consecutive years.
After that, select the most appropriate correction by region (the default selection is "Italy").
Once you have correctly set up the preceding parameters for processing, you can start the analysis by clicking "Ok".
You will be prompted for the name of the output file and for the target path. When the analysis is complete, the following window will be displayed:



The number of checks that had a positive outcome (in green) and a negative outcome (in red) will be indicated for each group. A summary of the overall outcome of the analysis will be displayed on the right side of the window. Specifically, the following items will be displayed:

- obtained score/maximum score;
- percentage of accuracy points obtained vs. maximum accuracy points;
- percentage of completeness points obtained vs. maximum completeness points;
- number of checks that failed and have a value exceeding CheckRT limits;
- number of checks that failed and have a value grossly exceeding CheckRT limits;
- alert for DCO values that exceed CheckRT limits (if any);
- indicative outcome for the purpose of AIRTUM accreditation.

Detailed results are provided in the output file. To access this file, simply click the button that appears under the summary of the results. The structure of the output file is shown in the following figure:



The typical format used for presenting results is as follows:
[Outcome] CheckNumber) CheckDescription (RegistryValue – ExpectedValue) p-value: Value [Alert]
Where:

Data field	Description
Outcome	Is "!" when the check fails with a confidence of 95% but not of 99% and "!!!" when the check fails with a confidence of both 95% and 99%. Otherwise, the check is considered as passed.
CheckNumber	The sequential value of the check in the group of checks.
CheckDescription	A brief text describing the portion of the case records being checked in the form of Denominator:Numerator.
RegistryValue	The value of the check in the Registry.
ExpectedValue	The value of the check in the reference population.
Value	The significance of differences according to Fisher's exact test.
Alert	If present, indicates that a check with an outcome of "!" or "!!!" also exceeds CheckRT limits.

For more information, please refer to the "Technical Support" topic in the program's Help system.

Restrictions and system requirements

CheckRT is the property of AIRTUM-CCM: its use is limited to the cancer registries associated with AIRTUM and the resale or copying thereof, even partial, is not allowed without the explicit permission of AIRTUM.

The minimum requirements for using *CheckRT* are as follows:

- operating system: Microsoft Windows 98 SE or higher (Windows XP recommended);
- memory: 256Mb or more (512Mb or more recommended);
- disk space: 60Mb or more.