APPENDIX 3

Contents

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User's Guide to INCAS-AIRTUM: Software for Selection of HDD and Mortality Listings

INCAS is a software program designed and developed by the Piedmont Center for Cancer Epidemiology and Prevention (CPO Piemonte) for the purpose of automatically selecting colorectal cancer-related hospitalizations from hospital discharge reports.

INCAS-AIRTUM is a modified version provided by AIRTUM for automatically selecting, in the same manner, hospitalizations related to all forms of cancer from hospital discharge reports.

While the software is set up to work with ICD-9-CM and ICD-9 codes, it can also be used with other databases storing one or more data fields containing the same codes. In view of its characteristics, it is best suited for use with data sets having fewer than 100,000 records.

The software contains tables with ICD-encoded diagnostic codes and treatment codes related to neoplasms.

In both cases, it was necessary to create two tables, one for the ICD codes written with a dot (e.g., 153.3), i.e., the "DP" tables for diagnoses and the "TP" tables for treatments, and those without a dot (e.g., 1533), i.e., the "DNP" tables for diagnoses and the "TNP" tables for treatments.

These tables were built based on selection criteria geared towards maximum sensitivity. In particular:

♦ for the diseases, the selection criteria contained in the Guidelines for Implementation of ICD-O-3, published by the NAACR ICD-O-3 Implementation workgroup in 2000 were used, with minor changes;

♦ for the procedures, the codes of biopsy investigations and more radical surgical procedures were identified, also taking into account the various cases in which the diagnosis of cancer is determined after hospitalization as a result of clinical diagnostics or surgery, due to the time it takes for the pathology report to be ready and the current tendency towards reduction in the duration of hospitalization.

Operation

The database automatically opens to the main menu page comprising a variety of buttons that must be used in sequential order.

1. *"Import Tables"*. Automatically displays the window used for importing the table on which you want to perform the selection.

2. *"Configure tables for selection"*. Automatically opens the page for selecting the title of the imported table, on which the selection will be performed; this procedure adds to the table the "Flag" (Yes/No) and "Key" (counter) fields, which are required to perform the selection (should you wish to repeat the selection in the same table once again, you will have to delete these two fields and repeat the steps starting from the "Configure Tables for Selection" button); when the processing is finished, click on the door to exit.

3. *"Select by diagnosis"*. Automatically displays a submenu allowing you to choose between ICD PUNTO (dotted ICD) or ICD NO PUNTO (dotless ICD) depending on whether the ICD in the table is encoded with or without a dot. Clicking the button you have chosen will open a page where you will have to **select again** the title of the table (by clicking the field) and the fields in which the diagnosis is recorded in ICD format; you can enter up to 6 field names, on which the selection will be performed. Before you perform the selection, it is important to make sure that all the selected fields are highlighted. The table containing the selection (INCAS_DIAG_NP or INCAS_DIAG_P) will open automatically. Quitting the table returns you to the selection screen, and clicking the door returns you to the submenu and then to the main menu.

4. *"Select by treatment"*. Here, too, you are asked to choose between ICD PUNTO (dotted ICD) and ICD NO PUNTO (dotless ICD) and, on the page that opens, you will need to select again the title of the table (by clicking the field) and the fields in which the treatment or surgery is recorded in ICD format. When all the fields of interest are highlighted, clicking the Select button will automatically open the table containing the patients who have one of the treatment codes of interest and have not been previously selected by diagnosis (INCAS_TRAT_NP or INCAS_TRAT_P). Quit the table and return to the main menu.

Note

Before you close INCAS you must export the selection tables you created (INCAS_DIAG_NP or INCAS_DIAG_P and INCAS_TRAT_NP or INCAS_TRAT_P) to the source database, otherwise the previous table will be overwritten, since every time this procedure is run on a new table the selection table that is created has the same name.

Following the steps in the order shown is important because when you perform a selection the records you have chosen will be marked and will not be selected any more. As a result, the two selection tables for diagnosis and treatment never contain the same records.