condition and in its view of the true purpose of the psychotherapeutic enterprise.

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HARRISON’S ON CD-ROM

HARRISON’S PLUS: HARRISON’S ON CD-ROM LINKED TO THE U.S. PHARMACOPEIA’S DRUG INFORMATION AND MORE

Major medical textbooks have recently started to appear in full text on CD-ROM. This new form of technology offers superior searching capability, with split-second retrieval time, compact storage (i.e., an entire shelf of medical books can be put on a single disk), frequent updates, and the ability to print out and rearrange the text. For some internists these CD-ROMs may be their first encounter with this medium.

The Harrison’s CD-ROM contains the textbook itself, whereas the Harrison’s Plus CD-ROM contains two distinct parts: the textbook and the U.S. Pharmacopeia’s Drug Information, a drug-information data base. We shall describe each of these parts separately.

Harrison’s CD-ROM contains the full text and illustrations of the 13th edition of Harrison’s Principles of Internal Medicine. Also included are Medline abstracts of selected references.

In addition to using the index or chapter list (both of which are available in these electronic versions), one can also search for an item with the use of strings of text (key terms or phrases). One major difficulty with searching a 2500-page comprehensive medical textbook is the huge number of matches for almost any subject or combination of subjects. For example, the word “anemia” produced 659 matches, “Marfan syndrome” produced 38 matches, and even the combination of “hypertension” and “proteinuria” yielded 18 matches. Clearly this is a confusing situation. How can a user decide which matches are the relevant ones? Fortunately, the search module provides the user with four effective tools to solve this problem.

First, there is the “smart match.” When one chooses this unique option, the software automatically calculates a relative relevance score for each match and ranks the matches from the most to the least relevant, presenting the top 20.

A second option is “match summary.” In this option the entire match list is presented as a condensed chapter list. Only the parts, chapters, and sections of the book that contain matches are listed. For example, for the word “pneumocystis,” the output match summary listed only the relevant parts of the book, such as those covering infectious diseases and disorders of the respiratory system, and within each part only the sections containing matches were listed. Since our original purpose in this case was to find out about Pneumocystis carinii in the context of bone marrow transplantation, we chose the hematology and oncology part mentioned and found two matches: a chapter on leukemias and a chapter on bone marrow transplantation.

A third option is to refine the search query. Suppose you searched for matches for the word “anemia” using the smart-match option and found 659 matches ranked according to their relevancy. Browsing through this list, you find a chapter on anemia due to decreased red-cell production and, while reading it, you decide you want to concentrate on anemia related to folic acid deficiency. This feature of the package enables you to highlight the relevant words (in this case “folic acid”) and cross-search this new item with the original search, narrowing the number of matches to 15.

The fourth option is the precision bar. When two or more terms are combined, the precision-bar setting determines how far apart the terms can be in the text and still qualify as a match. For example, when we searched for the term “hemorrhagic shock” with the proviso that “all the search terms must appear within the section,” there were 22 matches. Narrowing the search down by changing the precision-bar setting so that “all search terms must occur in exact adjacent sequence” resulted in four matches.

A very useful addition to the text is the inclusion of Medline abstracts for selected references, allowing users to read the abstract by merely clicking on the highlighted references that appear at the end of each chapter. However, we found that abstracts are available for only a small number of references. Thus, out of approximately 10,000 journal references cited in Harrison’s, only about 13 percent include abstracts. We hope that in future editions all such references will be accompanied by an abstract.

Although the photographs of the color atlases are fully reproduced on screen, their overall quality on a Super VGA monitor is somewhat poorer than that of the actual textbook. Moreover, since photographs must be retrieved one by one, we found the handling of color plates to be a minor drawback of the program.

The Harrison’s Plus CD-ROM contains the full text of the monographs appearing in the U.S. Pharmacopeia’s Drug Information. This portion of Harrison’s Plus is updated semiannually, and the buyer is entitled to two free updates in the first year. Older versions will eventually expire, entering a “soft expiration” mode, in which the save and clipboard (copy and paste) options are no longer available. The searching, viewing, and printing options, however, remain active so that the data base remains accessible. The Harrison’s portion of the CD remains unaffected by the expiration.

The drug data base can be entered by highlighting a drug’s name in the Harrison’s text, causing the drug monograph to appear on the screen, or by an independent search of the U.S. Pharmacopeia’s Drug Information.

The package performs very well on a 486 PC with a double-speed CD-ROM drive, although the process of retrieving tables and abstracts is somewhat slow. The software is supported on networks for both the IBM PC and Macintosh systems. An important advantage of this CD is the ability to print sections of the text from both Harrison’s and the U.S. Pharmacopeia’s Drug Information. This feature is useful both as a teaching aid and for inclusion in patients’ files.

We found the search module of this CD-ROM very suitable for medical textbooks, but less so for searching through drug information databases.