New Journal Will Publish Without Paper

Current Clinical Trials *will be the first online, peer-reviewed journal, but critics wonder just who will read it.*

THE TYPICAL SCIENTIFIC PAPER GOES THROUGH a curious metamorphosis on its way into the scientific literature. It is written on a computer, printed out and submitted to a journal on paper, keyed back into a computer for typesetting, and then transferred back onto paper for publication. Why not just do everything on a computer, eliminating some production time and saving a few trees in the process?

Why not, indeed, say the backers of *The Online Journal of Current Clinical Trials*, a joint venture of the American Association for the Advancement of Science (AAAS) in Washington, D.C., and OCLC Online Computer Library Center, a nonprofit computer library service and research organization headquartered in Dublin, Ohio. *Current Clinical Trials* is being touted as the world's first online, peer-reviewed journal. The new "publication," scheduled to make its debut next April and publicly announced this week, will be available only in an electronic format—although paper editions may be made for archival purposes. To as great an extent possible, manuscripts will be submitted, peer-reviewed, and edited without ever going from electrons to ink. There will be no constraints on space and no formal weekly or monthly publication date; instead, articles will be available to subscribers as soon as they have passed peer review and been given final approval by the journal's editor. Taking advantage of this timeliness was a key reason AAAS and OCLC chose clinical trials as their first electronic venture. *Current Clinical Trials* "will be the first journal to make immediately available findings that could save or extend the lives of critically ill patients," says Edward J. Huth, the journal's first editor.

Not everyone who has heard about the project buys this. Former *New England Journal of Medicine* editor Arnold Relman is skeptical that the all-electronic journal will really get crucial clinical results into the hands of physicians much faster than the current paper journals. "The technology, while attractive, will save some time, but it won't speed things up that dramatically," Relman says. And he doubts that editors, authors, and reviewers will all have compatible software that will allow them to exchange complete manuscripts—including graphs and tables—electronically. He also points out that it will be hard to change a culture in which authors are used to seeing their work published in black and white, not on a cathode ray tube. "The hard copy journal is hard to beat," says Relman.

The publishers of *Current Clinical Trials* are keenly aware of these hurdles. Patricia A.
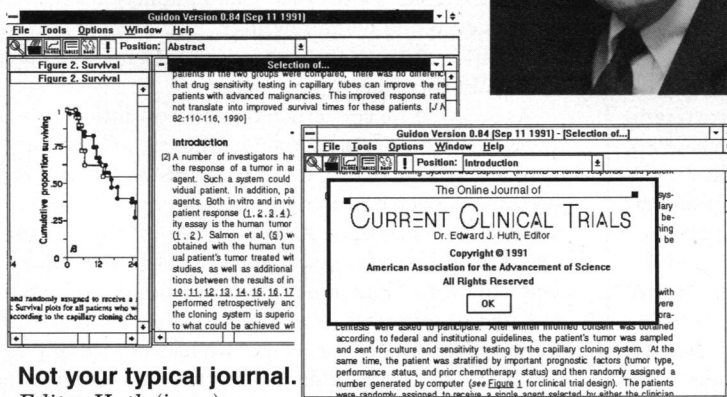
Not your typical journal. *Editor Huth* (inset) *says long papers and articles reporting negative findings, which are now difficult to publish, will find a place in the journal.*

Morgan, director of publications for AAAS and a driving force behind the new journal, says attracting top-notch papers will be one key to success. She is also elated that BIOSIS, one of the largest online bibliographic databases for biological information, has agreed to index articles appearing in the journal. This should help convince authors that the electronic medium is an accepted alternative to paper publication, she says.

The new journal should also be helped by the prestige its first editor brings to the job. Huth was chief editor of the *Annals of Internal Medicine*, the most widely cited medical specialty journal in the world. Morgan says Huth has already had tremendous success in recruiting top clinical researchers for the journal's editorial board. Curtis L. Meinert, an epidemiologist from Johns Hopkins School of Hygiene and Public Health, has agreed to be a consulting editor for methodology.

If editorial clout isn't enough to sell this innovative gamble, its backers are counting on the wealth of snappy software tools that *Current Clinical Trials* offers to make reading the journal as easy as possible. For the $110-subscription price, subscribers with IBM-compatible computers using a 286 or higher processor, a VGA color monitor, Microsoft's Windows 3.0 software, 2 megabytes of memory, and a modem will get a software package that will enable them to see articles on their screens that will look like a typeset page. Readers with less sophisticated hardware will be able to receive the journal as straight text. Users can access the journal either through OCLC's own network with nodes scattered throughout the world, or through the commercial CompuServe network or the National Science Foundation supported Internet. Pop-up menus allow readers to see abstracts of articles referenced in the paper they are reading. Subscribers with special interests who don't want to log in every day can arrange to be notified by fax whenever an article on a topic of interest is put online.

As attractive as the software seems, however, it has one potential problem: For at least 8 months, it will be available only to people using IBM-compatible computers. OCLC estimates that only about one quarter of physicians with computers have IBMs; the rest use Unix workstations and Apple Macintosh computers. "I'd be much happier if we were launching it with a Mac interface," says Morgan. But OCLC, which developed the necessary software, has been entirely IBM-based, so they went that route first. Even when the Macintosh software arrives, some wonder how many physicians will be able to access the journal. Relman argues that physicians have been slow to use personal computers, so many doctors' offices won't be able to download the journal.

Still, even skeptics applaud the AAAS-OCLC effort. "I'm glad someone is trying it," says Relman. And others believe that it is inevitable that someday fully online journals will be routinely accepted. "Somebody has to start it, so I applaud it," says Erich Bloch, former director of the National Science Foundation and now a fellow with the Council on Competitiveness. "If I were AAAS, I would have gone a step further," says Bloch. "I would have put *Science* online." ■ JOSEPH PALCA