

ORCAS: Network-based management of cancer clinical trials

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Background. The complexity of information management in cancer clinical trials has been known for two decades. [1]. Initial approaches focused on the complexity of collecting data in protocols [2], while more recent investigators have focused on knowledge reuse [3] and patient accrual [4]. The Oregon Cancer Center (OCC) at Oregon Health Sciences University (OHSU) manages a large number of investigator-initiated and cooperative protocols. Managing protocols in their various stages, tracking adverse events for study sponsors and the FDA, and allowing easier accrual of patients are complex tasks for which an informatics application can help. Towards this end, we have implemented the Oregon Cancer Access System (ORCAS). The major objectives of this system are to meet the goals described above with an easy-to-use system that takes advantage of OHSU's statewide physician and computer networks.

System. ORCAS was developed using a standard Windows interface. Using Paradox tables to hold the data, and a user interface developed with Borland's Delphi, the system has a low resource demand on a standard PC, and can easily be installed on a single PC, or networked with dozens of users (see Figure). The Delphi development environment allowed for a highly iterative development process, with constant input from the end users. In preparation for eventual movement to an intranet-based system, all protocol documents and forms have been converted to HTML format. A built-in HTML viewer in ORCAS allows the administrators to view, search and print them.

OCC administrators use the current version of ORCAS to track compliance reviews and protocol status. By using the query and search features of the system, administrators can match incoming requests by physicians to appropriate research protocols. The network capabilities of the system allow the entire team of administrators and assistants to view real time changes to protocol data and track the amount of administrative time spent on each protocol.

Future Plans. The main users of ORCAS are current OCC staff who manage protocols. The next

major plan for development is to add functionality for physician users. While the initial physician targets will be OCC oncologists who will enter and manage protocol data, the main innovation will be a Web-based interface that allows all oncologists statewide to not only refer patients into protocols but also allow them to carry out the protocols remotely in their offices and enter the data into Web forms that are securely transmitted back to the database at OCC.

References

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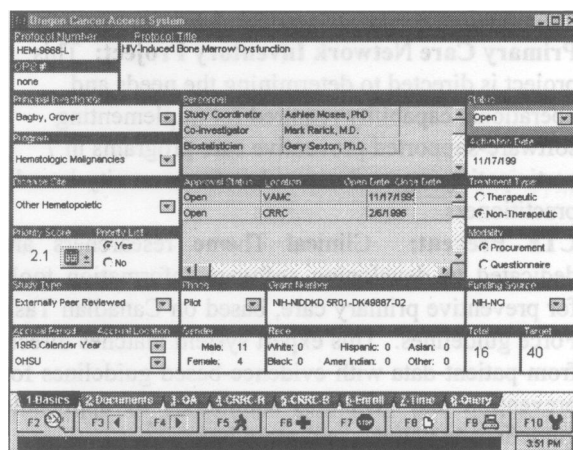


Figure - ORCAS main page.