achieved a dramatic technological, and I would add, certainly humanitarian breakthrough that benefits us all.

The AEC's history of support for basic research into the causes and treatment of cancers is relatively well known within medical circles. There is another area, however, where nuclear energy's contributions have been quite as significant but are not so visible. That is in immunology and transplantations. It would not be an exaggeration to say that the basic push for research on the immune system was made by the AEC as part of its search for a successful treatment for severe radiation injury, which may destroy the body's natural immune mechanism. Little by little, beginning in the days of the Manhattan District, research into immunology, supported by the AEC, has provided a massive amount of new knowledge on how man's immune system works. From that understanding we are reaching now toward control of the immune system and treatment of diseases and injuries for which there is now a poor prognosis. Among those—and here lies the Atomic Energy Commission's focus—is serious radiation injury. The best potential treatment for severe radiation injury is to replace the damaged bone marrow, the primary source of the body's disease-fighting agents. A few bone marrow transplants have been made successfully in man, but most experience has been with animals. We believe that the time is quickly approaching when we can expect considerably more success. Just this summer the AEC cosponsored an international conference of the Transplantation Society to develop a clinical protocol for bone marrow transplants in man. An immediate and significant result of that meeting was establishment of an international registry of human bone marrow transplant cases—a major step toward a standard clinical protocol and the day when bone marrow transplants will be an accepted and valuable treatment for leukemia and some 20 other diseases of the blood.

The AEC is involved in still another field of work that may have significant bearing on the future of medicine. This has to do with clinical chemistry. The number of clinical tests done per year in the United States has been increasing at a rate in excess of 15% per year, and it is estimated that more than one billion tests were performed in the U.S. during 1968. As the demand for clinical chemistry services expands at this explosive rate and as research provides new and more complex tests for detecting disease, it is evident that new automated analytical systems will be required. As a joint effort between the AEC and the National Institute of General Medical Sciences, basic studies have been undertaken at the Oak Ridge National Laboratory and the