

**Public release date: 11-Feb-2008**

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[JAMA and Archives Journals](#)

## **Donors' health associated with risk of infection among recipients of corneal transplants**

Corneal grafts obtained from donors dying in the hospital or with cancer may be associated with an increased risk of infection for the recipient, according to a report in the February issue of Archives of Ophthalmology, one of the JAMA/Archives journals.

Infection is an uncommon but serious complication of corneal transplant, the authors write as background information in the article. Most infected eyes lose vision or become blind. Various practices have been instituted to reduce the risk of infection, including refusing donors who have blood or other infections and retrieving and preserving tissue with antiseptic tools.

The Eye Bank Association of American monitors corneal transplants for infections that may be attributed to donor eye tissue. Sohela S. Hassan, Dr.P.H., of the Baylor College of Medicine, Houston, and colleagues used data from a surveillance registry to determine whether the donor's health status was associated with risk of infection in the recipient. The researchers collected donor information for all cases of the eye infection endophthalmitis reported for transplants performed between 1994 and 2003. They then selected two controls for each case who had the same surgery date but did not develop an infection.

During the 10 years of the study, eye banks distributed 340,174 donor corneas in the United States and 109,009 internationally. A total of 162 cases of endophthalmitis were reported. The odds of infected recipients having received a cornea from a hospitalized donor were three times that of non-infected recipients. In addition, death of the donor from cancer was considerably more likely among the recipients who developed infections. The cause is unclear, but donors could acquire harmful microorganisms in the hospital and transmit them to the patients, the authors note.

The results provide evidence that the donor's health before death may affect their eye tissue, but do not warrant excluding broad categories of donors, the authors note. A blanket deferral from donation by hospitalized patients or those with cancer would be unreasonable as most corneas from these donors do not result in complications, they write. Further, efforts are needed

to determine what illnesses, interventions or other reasons might explain the pathway linking certain donors with recipient infection. We advocate judicious evaluation of decedents and encourage efficient recovery and delivery of donated tissues, but we also recognize an opportunity for better methods of microbiological assessment and control to reduce infections associated with corneal transplant.

(Arch Ophthalmol. 2008;126[2]:235-239. Available pre-embargo to the media at [www.jamamedia.org](http://www.jamamedia.org).)

Editor's Note: This study was supported under a Ruth L. Kirschstein National Research Service Award from the National Eye Institute, National Institutes of Health, Bethesda, Md., and by unrestricted grants from the Eye Bank Association of America, Washington, D.C., Research to Prevent Blindness, Inc., New York, and the Sid W. Richardson Foundation, Fort Worth, Tex. Please see the article for additional information, including other authors, author contributions and affiliations, financial disclosures, funding and support, etc.

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### **Editorial: Reporting Systems Enhance Transplant Safety**

The results of the analysis support several changes in eye banking and also point to the necessity of reporting adverse events, writes Joel Sugar, M.D., of the University of Illinois at Chicago Eye Center, in an accompanying editorial.

Certainly we should not eliminate the use of hospital-derived tissue because this is the most tissue available and the tissue is safe in the overwhelming majority of cases. Also, the number of patients with cancer is second only to the number with cardiac disease, making up 19.2 percent of donors in 2005, Dr. Sugar writes. Development of better methods of microbial assessment and prophylactic treatment of donor tissue would be worthwhile.

Most importantly, this study demonstrates the importance of having a national reporting system with an overview of adverse reactions related to donor tissue. Strict compliance with reporting will allow risk information to be acquired and will hopefully lead to even greater improvements in tissue safety for the future.

(Arch Ophthalmol. 2008;126[2]:262. Available pre-embargo to the media at [www.jamamedia.org](http://www.jamamedia.org).)

Editor's Note: Please see the article for additional information, including author contributions and affiliations, financial disclosures, funding and support, etc.

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