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Press Release

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# CANCER RISK THE SAME FOR KIDNEY TRANSPLANT RECIPIENTS, NO MATTER THE DRUG

**Washington, DC (April 23, 2010) —** Drugs taken by kidney transplant recipients to prevent organ rejection carry similar risks of cancer, according to a study appearing in an upcoming issue of the *Journal of the American Society Nephrology* (JASN). The results suggest that no single medication is to blame for the higher incidence of cancer seen among patients who have undergone transplantation.

Individuals who receive a kidney transplant have an increased risk of developing cancer compared with the general population. Researchers suspected that the increased risk may come from immunosuppressive medications that patients must take long-term to prevent organ rejection. To investigate, Martin Gallagher, MBBS, FRACP (The George Institute for International Health in Australia) and his colleagues studied the incidence of cancer in transplant patients who took part in a randomized clinical trial 20 years ago, looking for any differences in cancer risk associated with different immunosuppressive drugs.

The researchers studied the incidence of cancer among 481 kidney transplant recipients in the Australian Multicentre Trial of Cyclosporine Withdrawal who each received one of three treatment regimens: azathioprine and prednisolone, cyclosporine monotherapy, or cyclosporine monotherapy followed by a switch to azathioprine and prednisolone after three months.

A total of 226 patients in the trial developed at least one cancer. By 20 years post transplant, 27% of patients developed non-skin cancer and 48% of patients developed skin cancer. One type of treatment did not have a greater effect on cancer timing or incidence than another, indicating that the therapies carry similar risks for cancer after kidney transplantation.

“We have shown no significant differences with a high degree of precision, allowing us to conclude that any differences in cancer risk from these different treatments are unlikely to be clinically significant,” said Dr. Gallagher. He added that this study provides the strongest evidence yet that no single immunosuppressive medication appears to drive the increase in cancer risk seen after transplantation.

The study also indicates that certain patient characteristics that are known at the time of transplantation have a significant effect on recipients' increased risk of cancer. (Non-skin cancer was associated with increasing age and previous smoking history; skin cancer was associated with increasing age, non-brown eye color, fairer skin, and a functioning transplant.) Therefore, patients at especially high risk can be monitored more closely and use preventive measures to protect against cancer.

The authors noted that immune suppressive treatments have evolved since the trial was designed 20 years ago. It is likely that today's immunosuppressive regimens, which are better at preventing acute rejection, are more potent at immunosuppression.

Study co-authors include Meg Jardine, MBBS, PhD, FRACP, Vlado Perkovic, MBBS, PhD, FRACP, Alan Cass, MBBS, PhD, FRACP (The George Institute for International Health); Patrick Kelly, PhD, Jonathan Craig, MBBS, PhD (University of Sydney, in Australia); Josette Eris, MBBS, PhD, FRACP (Royal Prince Alfred Hospital, in Camperdown, Australia); and Angela Webster, MBBS, PhD, MRCP (University of Sydney and Australia and New Zealand Dialysis and Transplant (ANZDATA) Registry, in Adelaide, South Australia).

Disclosures: Dr. Gallagher and Dr. Perkovic have received speaking fees from Roche Pharmaceuticals. Dr. Eris has received travel assistance from and chairs advisory boards of Roche (chair), Novartis, Wyeth, and Janssen-Cilag; she has also received travel support from Novartis and Roche within the last three years. The ANZDATA Registry has received contributions from Roche, Wyeth and Novartis.

The article, entitled "Long-Term Cancer Risk of Immunosuppressive Regimens after Kidney Transplantation," will appear online at http://jasn.asnjournals.org/ on April 29, 2010, doi 10.1681/ASN.2009101043.



*Founded in 1966, the American Society of Nephrology (ASN) is the world's largest professional society devoted to the study of kidney disease. Comprised of 11,000 physicians and scientists, ASN continues to promote expert patient care, to advance medical research, and to educate the renal community. ASN also informs policymakers about issues of importance to kidney doctors and their patients. ASN funds research, and through its world-renowned meetings and first-class publications, disseminates information and educational tools that empower physicians.*

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