



Risk of Cancer is Greater for Individuals with Kidney Transplants

Recent research has demonstrated an increased risk of developing various types of cancer among individuals with kidney transplants, especially cancers caused by a virus. After any type of organ transplant, an individual's immune system is suppressed in order to prevent rejection of the transplanted organ. Immune suppression, however, is associated with an increased risk of non-melanoma cancers, non-Hodgkin lymphoma (cancer in the lymphoid tissues), and Kaposi sarcoma (cancer that develops in the connective tissue such as cartilage, bone, fat, muscle, and blood vessels).

After comparing the incidence of cancer in individuals receiving immune suppression after a kidney transplant with incidence in the same population in two time periods before receiving immune suppression (during end-stage renal disease before renal replacement therapy and during dialysis), researchers found individuals with kidney transplants exhibited a 3.3 increased risk of developing cancer when compared to individuals without kidney transplants. Measuring the incidence of 18 different types of cancer among individuals with kidney cancer, researchers found that 13 of these cancers were caused by a virus, five of which were attributed to the human papillomavirus (HPV). Furthermore, cancers associated with the Epstein-Barr virus and hepatitis C or C virus were also observed among individuals with kidney transplants.

Scientific evidence demonstrates that viral infection is more likely to occur in individuals with suppressed immune systems, thereby increasing their risk for developing cancers caused by a virus. Furthermore, individuals with kidney transplants are on immunosuppressant medications, which decreases resistance to viral infections and could potentially elicit preexisting, dormant infections. Despite the increased risk of cancer among individuals with kidney transplants, researchers note that kidney transplantation continues to be an appropriate clinical method for managing kidney disease and improving the quality of life for these individuals. These findings demonstrate the importance of regular cancer screenings and proper disease management for individuals with kidney transplants.

Source: Vajdic CM et al. (2006). Cancer Incidence Before and After Kidney Transplantation. JAMA 296 (23): 2823-2831.

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