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News

STS Press Release

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Donor Lungs from Heavy Smokers Appear Safe for Transplantation

Lungs from heavy smokers may provide much-needed expansion of donor pool

Chicago – Transplanting lungs from donors with a history of heavy smoking does not appear to negatively affect recipient outcomes following surgery, according to a study in the March 2014 issue of *The Annals of Thoracic Surgery*.

Currently, lung transplantation is significantly limited by donor organ shortage, and a smoking history of more than 20 pack years (equivalent to smoking a pack a day for 20 years) often makes lungs ineligible for donation.

Anton Sabashnikov, MD, from Royal Brompton & Harefield NHS Foundation Trust at Harefield Hospital in Middlesex, United Kingdom, and colleagues collected and analyzed patient and donor characteristics, as well as outcome data, for all lung transplantations performed at Harefield Hospital between 2007 and 2012. The authors evaluated the association between donor smoking history and post-transplant patient outcomes.

Key Points

- Transplanting lungs from donors who smoked or were heavy smokers did not negatively impact early and mid-term patient outcomes.
- Lung transplantation is significantly limited by donor organ shortage, and a smoking history of more than 20 pack years (equivalent to smoking a pack a day for 20 years) often makes lungs ineligible for donation.
- Commentary author says results offer hope to patients waiting for a lung transplant.

The analysis included 237 lung transplant patients who were divided into three groups: non-smoking donors (53%), smoking donors (29%; less than 20 pack years), and heavy smoking donors (18%; greater than 20 pack years).

After excluding patients transplanted with organs from donors with an unknown smoking history, donors from all three groups had comparable characteristics at the start of the study, with the exception that heavy smoking donors were significantly older than donors in the other two groups.

The researchers found that transplanting lungs from donors who smoked or were heavy smokers did not yield inferior early or mid-term outcomes compared with lungs from donors who never smoked.

“Based on our results, history and extent of donor smoking do not significantly affect early and mid-term patient outcomes following lung transplantation,” said Dr. Sabashnikov. “While this does not eliminate the need for long-term follow-up, donor lungs from heavy smokers should be considered for patients needing lung transplantation as they may provide a valuable avenue for expanding donor organ availability.”

Hope for Lung Transplant Patients

In an invited commentary in the same issue of *The Annals*, Pierre-Emmanuel Falcoz, MD, PhD, from University Hospital in Strasbourg, France, noted the importance of the findings. “The results of this study should give patients waiting for a lung transplant what they need most – hope,” said Dr. Falcoz. “The findings shed light on the possibility of reducing waiting-list mortality by maximization of donor selection. The number of available organs for a given patient will increase.”

He added that by showing that a positive smoking history in donors has no discernable negative impact on early or mid-term transplant outcomes, “the current policy of refusing donors with a smoking history of at least 20 pack years is clearly questioned.”

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For a copy of the study or commentary, contact Cassie McNulty at 312-202-5865 or cmcnulty@sts.org.

Founded in 1964, The Society of Thoracic Surgeons is a not-for-profit organization representing more than 6,700 cardiothoracic surgeons, researchers, and allied health care professionals worldwide who are dedicated to ensuring the best possible outcomes for surgeries of the heart, lung, and esophagus, as well as other surgical procedures within the chest. The Society’s mission is to enhance the ability of cardiothoracic surgeons to provide the highest quality patient care through education, research, and advocacy.

The Annals of Thoracic Surgery is the official journal of STS and the Southern Thoracic Surgical Association.