

At-a-Glance

- **Proposal to Encourage Organ Procurement Organizations (OPO) to Provide Computed Tomography (CT) Scan if Requested by Transplant Programs, And to Modify Language in 3.7.12.3 for Currency and Readability**
- **Affected Policies:** 3.7.12.3 (Essential Information for Lung Offers) and 3.7.12.4 (Desirable Information for Lung Offers)
- **Thoracic Organ Transplantation Committee**

The Thoracic Committee proposes the addition of non-contrast CT scan of the chest to Policy 3.7.12.4. The proposed policy encourages an OPO to provide the result of a CT scan if it is requested to do so by a transplant program. The proposed policy does not require a transplant program to request a CT scan.

Deceased donor lungs may have contusions or infiltrates or malignant nodules which may not be visible in a chest x-ray (CXR). In instances where significant clinical suspicion for such abnormalities exists, a non-contrast CT scan of the chest can provide additional information.

- **Affected Groups**
 - Directors of Organ Procurement
 - OPO Executive Directors
 - OPO Medical Directors
 - OPO Coordinators
 - Transplant Administrators
 - Transplant Physicians
 - Transplant Surgeons
 - Transplant Program Directors
 - Organ Candidates
 - General Public
- **Number of Potential Candidates Affected**

The proposed policy will affect all lung transplant candidates.
- **Compliance with the OPTN Final Rule**

The following constructs in the OPTN Final Rule support the proposed policy modification:

 - 121.8 Allocation of organs.
 - (a) Policy development. [...]
 - (5) Shall be designed to avoid wasting organs, to avoid futile transplants...;
 - (6) Shall be reviewed periodically and revised as appropriate;
- **Specific Requests for Comment**

What is the business impact of this proposed policy for OPOs? Also, please comment on the entire proposal.

Proposal to Encourage Organ Procurement Organizations (OPO) to Provide Computed Tomography (CT) Scan if Requested by Transplant Programs, And to Modify Language in 3.7.12.3 for Currency and Readability

Affected Policies: 3.7.12.3 (Essential Information for Lung Offers) and 3.7.12.4 (Desirable Information for Lung Offers)

Thoracic Organ Transplantation Committee

Summary of the Proposal:

The Thoracic Committee proposes the addition of non-contrast CT scan of the chest to Policy 3.7.12.4. The proposed policy encourages an OPO to provide the result of a CT scan if it is requested to do so by a transplant program. The proposed policy does not require a transplant program to request a CT scan.

Deceased donor lungs may have contusions or infiltrates or malignant nodules which may not be visible in a CXR. In instances where significant clinical suspicion for such abnormalities exists, a non-contrast CT scan of the chest can provide additional information.

Background and Significance of the Proposal:

Lungs offered from deceased donors may have emphysema, contusions, or infiltrates or malignant nodules, which may not be visible in a CXR. In instances where a high level of clinical suspicion exists for such abnormalities, a non-contrast CT scan of the chest can provide better visualization of potential lung parenchymal abnormalities, potentially preventing the transplant of a severely damaged lung. The CT scan can also identify nodules which may be malignant, preventing the transmission of cancer or tumors to the recipient. The detailed information available from a CT scan of the chest may be helpful in allowing the transplant center receiving the offer to more adequately assess the medical suitability of the lung offer. If the results of the CT scan suggest that the lungs offered are medically suitable for the potential recipient, then this could lead to increased utilization of lungs that might have been refused previously for transplant.

In some instances, it is possible that an OPO will not be able to provide results of a CT scan of the chest for deceased donor lungs due to lack of relevant equipment at the donor hospital. Or, if the donor is not stable medically and organ recovery needs to occur quicker than the process required to perform a CT scan, an OPO or donor hospital may not be able to perform a CT scan even if the radiographic equipment is accessible.

Policy options discussed included leaving Policy 3.7.12.4 as is, providing guidance through an educational missive, and requiring the provision of a CT scan of the chest if requested. While surveys and educational initiatives may promote provision of information by OPOs to transplant programs, a policy that states that OPOs are encouraged to provide these data is stronger in its ability to deliver the message that OPOs are encouraged to provide CT scans when they are requested for lung offers. The proposed policy encourages the provision of information requested by a transplant program, not to change practices without evidence.

Due to the associated renal risks and marginal potential benefit compared with a non-contrast CT scan, the proposed policy recommends the performance of a CT scan without the use of intravenous contrast.

The review of language in Policy 3.7.12.4 resulted in a review of language in Policy 3.7.12.3 (Essential Information for Lung Offers). Thus, this proposed policy also includes modifications to Policy 3.7.12.3.ii (bronchoscopy results). Modifications to Policy 3.7.12.3 include the elimination of references to “donor center” and general edits for readability. The Host OPO is responsible for providing essential information to transplant programs. Not all donor centers are OPTN members; and, non-OPTN members are not subject to OPTN policy. Anecdotal evidence suggests that historically, the terms “donor center” and “Host OPO” were once used synonymously.

On January 24, 2011, the Thoracic Committee voted in favor of the proposed policy modifications and their distribution for public comment: 22-supported; 1-opposed; 0-abstained.

Intended Consequence

The transplant center will request a CT scan of lungs from donors with a medical or social history, or both, that would warrant this test. If a transplant center requests a CT scan of a deceased donor’s lung or lungs, the OPO will provide this information.

Unintended Consequence

Increased use of CT scans could lead to more frequent identification of abnormalities such as benign nodules, which in turn could lead to rejection of lungs that would otherwise be accepted. Thus, this proposed policy could result in the underutilization of medically suitable lungs. Also, the provision of CT scans could further delay acceptance of an organ offer.

Supporting Evidence:

Anecdotal evidence suggests that some transplant programs experience difficulty in receiving CT scans requested from OPOs. As CT scan is not a data element collected in UNetSM, the Thoracic Committee does not have information on how often transplant programs request this test and how often OPOs provide the results of this test.

Expected Impact on Living Donation:

The proposed policy will not affect the living donation process.

Expected Impact on Specific Patient Populations:

The proposed policy will affect all lung transplant candidates, especially when transplant physicians seek non-contrast CT scan results on lungs offered. The result of a CT scan could lead a transplant physician to decline lung offers on behalf of their candidates.

Adherence to OPTN Final Rule:

The following constructs in the OPTN Final Rule support the proposed policy modification.

[...]

“121.8 Allocation of organs.

(a) Policy development. [...]

(5) Shall be designed to avoid wasting organs, to avoid futile transplants...;

(6) Shall be reviewed periodically and revised as appropriate;” [...]

Anecdotal evidence suggests the need for this proposed policy, which encourages the request and provision of information necessary to avoid futile transplants or to avoid wasting organs.

Plan for Evaluating the Proposal:

Annually, the Thoracic Committee will evaluate results of routine site audits to evaluate the impact of this proposal. Some questions the Thoracic Committee will consider are:

- Are transplant programs requesting CT scans from OPOs? If so, is the request and provision of a CT scan occurring without issues?
- How often are transplant programs rejecting lung offers due to unanticipated findings on CT scans?

Additional Data Collection and Expected Implementation Plan:

This proposal does not require additional data collection in UNetSM. However, this proposal does encourage OPOs to provide the result of a non-contrast CT scan of the chest if requested by a transplant program receiving a lung offer on behalf of its candidate. The proposal also encourages OPOs and transplant programs to document communications with each other about, and provision and receipt of, CT scan result, as applicable.

Communication and Education Plan:

Communication Activities			
Type of Communication	Audiences	Deliver Method	Timeframe
Policy Notice	<ul style="list-style-type: none">• Directors of Organ Procurement• OPO Executive Directors• OPO Medical Directors• OPO Coordinators• Transplant Administrators• Transplant Physicians• Transplant Surgeons• Transplant Program Directors	E-mail	30 days after approval by the Board of Directors

Monitoring and Evaluation:

This proposal encourages OPOs to provide CT scans upon request. There is no mandate for the Department of Evaluation and Quality (DEQ) to monitor.

Policy Proposal:

3.7.12.3 Essential Information for Lung Offers. In addition to the essential information specified above for a thoracic organ offer, the Host OPO ~~or donor center~~ shall provide the following specific information with each lung offer:

- (i) Arterial blood gases on 5 cm/H₂O/PEEP including PO₂/FiO₂ ratio and preferably 100% FiO₂ within 2 hours prior to the offer;
- (ii) Bronchoscopy results. Bronchoscopy of a lung donor is recognized as an important element of donor evaluation, ~~and should be arranged by the Host OPO or donor center. If the Host OPO or donor center lacks the personnel and/or technical capabilities to comply, the bronchoscopy responsibility will be that of the recipient center. The inability of the Host OPO or donor center to perform a bronchoscopy must be documented.~~ The Host OPO must document if it is unable to provide bronchoscopy results. Confirmatory bronchoscopy may be performed by the lung retrieval team provided unreasonable delays are avoided. A lung transplant program may not insist upon performing its own bronchoscopy before being subject to the 60 minute response time limit as specified in Policy 3.4.12;
- (iii) Chest radiograph interpreted by a radiologist or qualified physician within 3 hours prior to the offer;
- (iv) Sputum gram stain with a description of the sputum character; and,
- (v) Smoking history.

3.7.12.4 Desirable Information for Lung Offers. With each lung offer, the Host OPO ~~or donor center~~ is encouraged to provide the recipient center transplant center with the following information:

- Mycology smear; ~~and~~
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- Measurement of chest circumference in inches or centimeters at the level of the nipples and x-ray measurement vertically from the apex of the chest to the apex of the diaphragm and transverse at the level of the diaphragm, if requested; ~~;~~
and,
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- Non-contrast computed tomography (CT) scan of the chest, if requested by the transplant center.

There are no further changes to Policy 3.7.12.