Pre-lung transplant evaluation

Based on the possible indication for lung transplantation in your patient, a number of screening examinations need to be performed.

General information:
- Report of last consultation with medical and surgical history and up-to-date medication list

The following examinations are always performed at UZ Leuven:
- Blood sampling, including serology and IGRA, HLA testing
- Urine sediment, cytology, culture, and cotinine
- Sputum culture if possible, other cultures as indicated
- Arterial blood gas (pH, pO2, pCO2) on room air
- Chest X-ray
- Full lung function test with spirometry, diffusion, and volumes (body plethysmography)
- Measurement of peripheral and respiratory muscle strength
- ECG
- Intake consultation with a social worker, transplant psychologist, and transplant physiotherapist

The following examinations are preferably performed externally:

Laboratory tests:
- 24-hour urine collection for protein, electrolytes and clearance
- Sputum culture if possible (with Gram, Ziehl, and fungal staining)

Technical examinations:

Pulmonary evaluation:
- High-resolution CT scan of the thorax without contrast
- CT scan of the sinuses
- 6-minute walk test: without oxygen (unless a portable oxygen concentrator is already in use), also with oxygen if desaturation occurs to $sO_2 \leq 88\%$
- Cardiopulmonary exercise test (may be performed with oxygen if available)
- Ventilation-perfusion scan with quantification (right/left ratio and distribution upper/middle/lower lobe)
- Polysomnography in patients > 40 years old

Cardiovascular evaluation:
- Transthoracic echocardiography
- 24-hour Holter monitoring and 24-hour blood pressure measurement in patients > 40 years old
- Right heart catheterisation
- Coronary angiography in patients > 40 years old
- Arterial duplex scan of the carotid arteries and lower limbs

Abdominal evaluation:
- Abdominal ultrasound and abdominal CT scan
- Gastroscopy in patients > 40 years old. Please mention biopsy report.
- Total colonoscopy in patients > 40 years old. In case of biopsy, please mention pathology report.

Urogenital evaluation:
- Prostate ultrasound and urology consultation in patients > 50 years old (male)
- Mammography in patients > 40 years old (female)
- Gynaecology consultation including PAP smear (female)
- Cystoscopy in case of microscopic haematuria or previous therapy with cyclophosphamide

Orthopaedic evaluation:
- X-ray of the thoracolumbar spine
- Bone density scan in patients > 40 years old

Consultations:
- Ophthalmology consultation
- Stomatology/dental consultation (with panoramic X-ray/orthopantomogram)
- Ear, nose, and throat (ENT) consultation (malignancy screening, including laryngoscopy)
- Dietitian consultation if BMI < 21 kg/m² or > 28 kg/m²

The following examinations are performed upon indication from UZ Leuven:
- Genetic testing
- Pulmonary angiography
- Dipyridamole or dobutamine (MIBI) stress echocardiography, cardiac MRI
- PET/CT scan
- Brain CT, brain MRI
- Angio CT of the cervical vessels / aorto-iliac vessels

Wait list activation as a lung transplant candidate

The patient and their partner or trusted representative are introduced at UZ Leuven to the various members of the lung transplant team: transplant nurse, pulmonologist, surgeon, transplant coordinator, physiotherapist, dietitian (if indicated), social worker, and psychologist. The entire procedure surrounding lung transplantation, including expectations and risks, is discussed and patient brochures are provided. The information given to the patient includes the following:
- Life expectancy and quality of life with the current disease and after transplantation.
- The importance of pulmonary rehabilitation and nutritional optimisation before and after the transplant.
- The perioperative process, inherent risks, and expectations regarding the transplant surgery.
- The course of treatment in the intensive care unit and the transplant ward.
- The risk of acute and chronic rejection.
- The risk of infections under immunosuppressive therapy.
- The possibility of kidney dysfunction, lipid disorders, excessive hair growth, diabetes, possible changes in appearance, etc., due to treatment.
- The importance of strict medical follow-up and the lifelong need for medications to prevent rejection, infections, etc.
- The importance of frequent check-ups, including blood tests, lung function tests, imaging of the lungs and other organs, bronchoscopies with lavage and biopsies of the transplanted lungs, etc.
- The possibility of repeated hospital admissions.
- The modalities of transport to UZ Leuven, as well as the accessibility and contactability of the patient and their family, are discussed and clarified.

The decision to activate a patient on the lung transplant waiting list is always based on a multidisciplinary team discussion of the patient's medical file. If there are no major contraindications, the patient is accepted as a candidate for lung transplantation and activated on the Eurotransplant waiting list. The patient is always personally informed of this decision by a member of the lung transplant team. During the waiting list phase, the referring specialist together with the lung transplant pulmonologist act as the patient's primary treating physicians. The referring physician must ALWAYS keep the transplant team informed of any changes in the patient's condition (e.g., hospitalisation, exacerbation, accident, blood transfusions, etc.). To adequately monitor the patient's condition while on the waiting list, the patient is seen every 3-4 months at the pre-lung transplant consultation by a physician from the lung transplant team. If a new contraindication arises during the waiting list phase, the patient may be temporarily or permanently excluded from lung transplantation. After the transplant, the patient is followed lifelong by the lung transplant team.

We would like to sincerely thank all referring physicians.