

# End-of-life care for lung transplant recipients: a new role for palliative medicine

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## BACKGROUND

Little is known about the palliative care needs of lung transplant recipients (LTR), especially in their end-of-life phase. We reviewed the characteristics of LTR referred for co-management by palliative care (PC) at our center.

## METHODS

This was a monocentric retrospective study including all adult LTR who were referred to our PC consultation service between 2018 and 2022 for end-of-life care. We collected data on demographics, post-transplant PC encounters (including timing, location, and referral reason), signs and symptoms at referral and drugs being prescribed. Population was divided into groups based on reason of referral (neoplasm vs. allograft dysfunction of any kind) and on setting (outpatient vs. hospitalized).

## RESULTS

33 patients were considered: 21 males, median age at PC referral 48 (27; 60) years old. In Table 1 further characteristics of the population. 26 LTR were referred for terminal allograft dysfunction of any kind, whilst the rest (7) for neoplasm. The most frequently reported symptoms at referral were dyspnea (median mMRC3 (3; 4)) with oxygen desaturation on effort (29, 88%) and difficulty with everyday tasks (32, 97%); fatigue (33, 100%) and hyporexia (22, 71%) with weight loss (19, 61%); anxiety and depression (26, 81%). Most patients were prescribed specific PC medication since the first evaluation, in particular opioids (30, 94%), pain relievers (18, 69%) and anxiolytics (17, 71%). Based on indication, PC referral for graft dysfunction tended to be earlier than for neoplasm, as shown in Table 2, even if this difference was not statistically significant.

Demographics		
Age at LuTx, years		41 (23; 55)
Sex, males		21 (64)
Indication for LuTx	Cystic fibrosis	15 (46)
	ILD	16 (48)
	COPD	2 (6)
Referral to palliative care		
Age at referral, years		48 (27; 60)
BMI at referral, Kg/m <sup>2</sup>		20.6 (17.8; 24.2)
Time from LuTx, months		50 (20; 79)
Time from referral to death, days		12 (4; 70)
Status	Outpatient	17 (52)
	Hospitalized	16 (49)

TABLE 1

Significantly more prevalent findings in allograft dysfunction group were accessory muscle breathing (10, 39% vs 0, 0%; p 0.046), need for non invasive mechanical ventilation (17, 65% vs 2, 29%; p 0.046), prevalence of anxiety and depression (23, 89% vs 3, 43%; p 0.046).

### Time from PC referral to death

General population	Allograft dysfunction	Neoplasm	p
12 (4; 70)	17 (5; 81)	4 (1; 27)	0.143

TABLE 2

At time of first PC referral, 17 LTR were seen in the outpatient clinic; their referral proved to be significantly earlier than that of hospitalized patients. As expected, when compared to outpatient referrals, hospitalized patients were generally in more severe conditions (Table 3).

Variable	General population (33 patients)	Hospitalized (16 patients)	Outpatient (17 patients)	p-value
Days to death	12 (4; 70)	6 (2; 20)	70 (12; 141)	0.007
PaO <sub>2</sub> /FiO <sub>2</sub>	257 (221; 324)	231 (192; 288)	281 (244; 360)	0.036
Respiratory rate	22 (20; 26)	26 (23; 28)	22 (19; 23)	0.04
Karnofsky score	40 (30; 55)	40 (30; 40)	50 (40; 60)	0.02

TABLE 3

## CONCLUSIONS

While limited, our evidence suggests that palliative care can be successfully integrated into LTR management, especially in end-of-life care. Further research is needed to understand transplant recipients' needs, in order to improve the provision of PC in this particular setting.