

SUPPLEMENTAL DIGITAL CONTENT (SDC)

Strategy S1. MEDLINE Search Strategy

Ovid Medline (All) Search Strategy

- 1 Lung transplantation.mp. or Lung Transplantation/
- 2 lung transplant*.mp.
- 3 Exercise test*.mp. or Exercise Test/
- 4 Exercise tolerance.mp. or Exercise Tolerance/
- 5 Physical fitness.mp. or Physical Fitness/
- 6 exercise capacity.mp.
- 7 Walk test*.mp. or Walk Test/
- 8 physical function.mp.
- 9 physical functional performance*.mp. or Physical Functional Performance/
- 10 (Short Physical Performance Battery or SPPB).mp.
- 11 (sit-to-stand* or 5STS or 1-min STS or STS test or STST).mp.
- 12 (6MWT or six minute walk test* or six-minute walk test*).mp.
- 13 (2MWT or two minute walk test* or two-minute walk test*).mp.
- 14 (12MWT or twelve minute walk test* or twelve-minute walk test*).mp.
- 15 (cardiopulmonary exercise test* or CPET).mp.
- 16 (incremental shuttle walk test* or ISWT).mp.
- 17 (endurance shuttle walk test* or ESWT).mp.
- 18 (walking speed* or four-metre gait speed test* or 4-m gait speed test* or 4MGS).mp.
- 19 ("timed up and go test" or TUG).mp.
- 20 1 or 2
- 21 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19
- 22 20 and 21

Table S1. Direction of relationship between 6-minute walk test results in lung transplant candidates and clinical outcomes.

Clinical outcomes		Direction of the relationship		No relationship
		Higher 6MWD	Lower 6MWD	
Pretransplant	↓ mortality	Castleberry 2017 Ikezoe 2017 Klooster 2015 Layton 2017 Martinu 2008 Oshima 2019 Tuppin 2008 Yu 2018		Bennett 2015 Chen 2015 Stavem 2006
	↑ mortality		Higo 2017 Kadikar 1997 Kawut 2005 Lederer 2006 Leuchte 2015 Lotshaw 2006 Ochman 2020 Thabut 2008 Timofte 2020 Zhu 2021	
	↑ survival	Jastrzebski 2005		Ketchell 2009 Lotshaw 2012 Walsh 2016
	↓ survival		Kawut 2005 Timofte 2016	
	↓ delisting			
	↑ delisting		Zhu 2021	
	↑ QOL	Chen 2015 Feltrim 2012 ^a Verma 2011		Burns 1993 Feltrim 2012 ^b
	↓ QOL			
Posttransplant	↓ mortality	Martinu 2008 Sterrenberg 2014		Mayer 2021 Stavem 2006
	↑ mortality			
	↑ survival			Bauldoff 2017 Thabut 2008
	↓ survival		Lotshaw 2009	
	↑ QOL			Singer 2017
	↓ QOL			
	^a For bronchiectasis and cystic fibrosis. ^b For pulmonary fibrosis and emphysema. 6MWD, 6-minute walk test distance; QOL, quality of life.			

Table S2. Direction of relationship between tests results in lung transplant candidates and clinical outcomes pretransplantation.

Clinical outcomes		Direction of the relationship		No relationship
		Better test result	Worse test result	
Pretransplantation	CPET			
	↓ mortality	Kawut 2005 Layton 2017		
	↑ mortality		Armstrong 2015	
	ESWT			
	↑ survival			Ketchell 2009
	↓ survival			
	SPPB			
	↓ mortality			Wickerson 2020
	↑ mortality		Singer 2015	
	↓ delisting			Wickerson 2020
	↑ delisting		Singer 2015	
	↑ QOL	Rozenberg 2017 Singer 2013		
	↓ QOL			
	CPET, cardiopulmonary exercise test; ESWT, endurance shuttle walk test; QOL, quality of life; SPPB, Short Physical Performance Battery.			

Table S3. Direction of relationship between tests results in lung transplant candidates and clinical outcomes posttransplantation.

Clinical outcomes		Direction of the relationship		No relationship
		Better test result	Worse test result	
Posttransplantation	SPPB			
	↓ mortality			Mayer 2021
	↑ mortality			
	↑ QOL	Perez 2020		
	↓ QOL			
	4MGS			
	↓ mortality			Mayer 2021
	↑ mortality			
	5STS			
	↓ mortality			Mayer 2021
	↑ mortality			
	4MGS, 4-meter gait speed; 5STS, 5 times sit-to-stand; QOL, quality of life; SPPB, Short Physical Performance Battery.			

Table S4. Direction of relationship between tests results in lung transplant candidates and healthcare utilization outcomes.

Healthcare utilization outcomes	Direction of the relationship		No relationship
	Better test result	Worse test result	
6MWT			
↓ hospitalization LOS	Jackson 2018 Sterrenberg 2014		Massierer 2020 Mayer 2021
↑ hospitalization LOS			
↓ ICU LOS	Sterrenberg 2014		Massierer 2020 Mayer 2021
↑ ICU LOS			
↓ time MV	Mayer 2021		Massierer 2020 Walsh 2016
↑ time MV			
↓ rehospitalization			
↑ rehospitalization		Bauldoff 2017	
SPPB			
↓ hospitalization LOS	Mayer 2021		Rozenberg 2017 Wickerson 2020
↑ hospitalization LOS			
↓ ICU LOS			Mayer 2021 Wickerson 2020
↑ ICU LOS			
↓ time MV			Mayer 2021
↑ time MV			
Discharge destination			Wickerson 2020
4MGS			
↓ hospitalization LOS			Mayer 2021
↑ hospitalization LOS			
↓ ICU LOS			Mayer 2021
↑ ICU LOS			
↓ time MV			Mayer 2021
↑ time MV			
5STS			
↓ hospitalization LOS			Mayer 2021
↑ hospitalization LOS			
↓ ICU LOS			Mayer 2021
↑ ICU LOS			
↓ time MV			Mayer 2021
↑ time MV			
4MGS, 4-meter gait speed; 5STS, 5-time sit-to-stand; 6MWT, 6-minute walk test; ICU, intensive care unit; LOS, length of stay; MV, mechanical ventilation; SPPB, Short Physical Performance Battery.			

Table S5. Direction of relationship between the tests results in lung transplant recipients and clinical outcomes.

Clinical outcomes	Direction of the relationship		No relationship
	Better test result	Worse test result	
6MWT (pretransplant)			
↓ mortality	Smith 2018		Amor 2020 Bode 2018 Gonzalez Castro 2008 Wajda 2020
↑ mortality		Chaikriangkrai 2015	
↑ survival	Castleberry 2015 Kampschulte 2020 Machuca 2011 Smith 2018		Halpern 2020 Khawar 2019 Seoane 2010
↓ survival		Caires 2017	
↓ CLAD			Bode 2018 Gerbase 2008 Smith 2018
↑ CLAD			
↑ QOL			Rozenberg 2017
↓ QOL			
6MWT (posttransplant)			
↓ mortality			Ebenbichler 2020
↑ mortality		Nathan 2009	
↑ survival	Smith 2018		
↓ survival		Nathan 2009	
↓ CLAD			Smith 2018
↑ CLAD		Brugiere 2002 Ihle 2011	
↑ QOL	Gerbase 2005 ¹ Ihle 2015		Gerbase 2005 ²
↓ QOL			
CPET (posttransplant)			
↓ mortality	Armstrong 2011 Armstrong 2012		
↑ mortality			
SPPB (pretransplant)			
↓ mortality			
↑ mortality		Singer 2018	
↑ QOL			
↓ QOL		Kolaitis 2019	
SPPB (posttransplant)			
↓ mortality	Venado 2019		
↑ mortality		Venado 2020	
↓ CLAD			
↑ CLAD		Maheshwari 2021	
↑ QOL			
↓ QOL		Kolaitis 2019 Venado 2020	
^a For double-lung transplant. ^b For single-lung transplant. 6MWT: 6-minute walk test; CLAD, chronic lung allograft dysfunction; CPET, cardiopulmonary exercise test; QOL, quality of life; SPPB, Short Physical Performance Battery.			

Table S6. Direction of relationship between the tests results in lung transplant recipients and healthcare utilization outcomes.

	Direction of the relationship		No relationship
	Better test result	Worse test result	
6MWT (pretransplantation)			
↓ hospitalization LOS	Smith 2018		Halpern 2020
↑ hospitalization LOS			
Discharge destination			Halpern 2020 Rozenberg 2017
↓ rehospitalization			Halpern 2020
↑ rehospitalization			
SPPB (posttransplantation)			
↓ rehospitalization			
↑ rehospitalization		Courtwright 2018	
6MWT, 6-minute walk test; LOS, length of stay; SPPB, Short Physical Performance Battery.			