Appendix 1

Predictors of long-term employment among patients with cystic fibrosis undergoing lung transplantation

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Supplementary tables

Table S1: Results from univariate logistic models for work status within the first year post-transplant.				
	OR	**95% CI**	**p-value**	**BIC**
Age (years)	1.00	0.94 to 1.05	0.89	89.00
FEV1 (%)	1.01	0.98 to 1.04	0.55	88.89
BMI (kg/m²)	0.96	0.80 to 1.11	0.57	88.28
Education (academic)	3.21	1.09 to 9.59	0.03	84.28
Living status (alone)	0.55	0.12 to 1.93	0.39	87.62
Pre-employment status (employed)	5.33	1.94 to 16.02	0.0017	79.97
Relationship status (single)	0.77	0.28 to 2.16	0.62	89.00
Sex (male)	1.22	0.46 to 3.26	0.69	89.00
6MWTD (m)	1.00	0.99 to 1.00	0.68	88.73
Waitlist time (weeks)	1.00	0.99 to 1.01	0.67	88.93
BIC = Bayesian information criterion; BMI = body mass index; CI = confidence interval; FEV$_1$ = forced expiratory volume in 1s; OR = odds ratio; 6MWTD = six-minute walk test distance. The best model for this time period, i.e., yielding the smallest BIC value (79.97), was based on pre-employment status alone (OR 5.33, 95% CI 1.94 to 16.02, p = 0.002).				

Table S2: Results from univariate logistic models for work status one to three years post-transplant.

	OR	95% CI	p-value	BIC
Age (years)	0.96	0.90 to 1.01	0.11	91.92
FEV_1 (%)	1.01	0.98 to 1.03	0.59	93.64
BMI (kg/m²)	0.94	0.81 to 1.09	0.43	92.46
Education (academic)	6.17	1.57 to 41.17	0.02	85.46
Living status (alone)	0.98	0.32 to 3.32	0.98	93.70
Pre-employment status (employed)	8.24	2.73 to 31.11	0.00053	71.91
Relationship status (single)	1.22	0.47 to 3.12	0.68	93.02
Sex (male)	0.55	0.21 to 1.39	0.21	92.51
6MWTD (m)	1.00	1.00 to 1.01	0.84	93.56
Waitlist time (weeks)	1.01	1.00 to 1.03	0.10	91.84

BIC = Bayesian information criterion; BMI = body mass index; CI = confidence interval; FEV_1 = forced expiratory volume in 1s; OR = odds ratio; 6MWTD = six-minute walk test distance.
Based on the size of the ORs and the BIC values, we compared also the combination of pre-employment status and education. The best model for this time period, i.e., yielding the smallest BIC value (69.38), was based on pre-employment status and education.

Table S3: Results from univariate logistic models for work status three to five years post-transplant.

	OR	95% CI	p-value	BIC
Age (years)	0.96	0.90 to 1.03	0.26	59.32
FEV_1 (%)	0.99	0.95 to 1.03	0.63	60.35
BMI (kg/m²)	1.00	0.84 to 1.23	1.00	60.23
Living status (alone)	0.55	0.14 to 2.42	0.40	60.76
Relationship status (single)	0.98	0.28 to 3.24	0.97	61.10
Sex (male)	0.88	0.26 to 2.86	0.83	60.89
6MWTD (m)	1.00	0.99 to 1.01	0.89	61.10
Waitlist time (weeks)	1.00	0.99 to 1.03	0.65	61.10

BIC = Bayesian information criterion; BMI = body mass index; CI = confidence interval; FEV_1 = forced expiratory volume in 1s; OR = odds ratio; 6MWTD = six-minute walk test distance
For this time period, none of the patients with academic education were unemployed post-transplant (i.e. a zero entry in the corresponding cross tabulation). Therefore, associations between education and pre-employment status with post-employment status could not be computed.

Table S4: Results from univariate logistic models for work status five to ten years post-transplant.

	OR	95% CI	p-value	BIC
Age (years)	0.94	0.86 to 1.02	0.15	52.05
FEV_1 (%)	0.98	0.94 to 1.02	0.39	53.21
BMI (kg/m²)	0.94	0.74 to 1.16	0.53	53.05
Living status (alone)	0.52	0.11 to 2.48	0.40	52.57
Relationship status (single)	0.79	0.20 to 2.90	0.72	52.54
Sex (male)	0.80	0.22 to 2.85	0.73	52.97
6MWTD (m)	1.00	0.99 to 1.00	0.41	52.85
Waitlist time (weeks)	1.00	0.98 to 1.03	0.89	53.13

BIC = Bayesian information criterion; BMI = body mass index; CI = confidence interval; FEV_1 = forced expiratory volume in 1s; OR = odds ratio; 6MWTD = six-minute walk test distance.
For this time period, none of the patients with academic education were unemployed post-transplant (i.e. a zero entry in the corresponding cross tabulation). Therefore, associations between education and pre-employment status with post-employment status could not be computed.

Table S5: Results from univariate logistic models for work status more than 10 years post-transplant.

	OR	95% CI	p-value	BIC
Age (years)	0.93	0.81 to 1.04	0.21	31.83
FEV_1 (%)	0.99	0.93 to 1.03	0.57	32.78
BMI (kg/m²)	0.81	0.54 to 1.04	0.18	31.03
Living status (alone)	0.29	0.03 to 2.95	0.28	32.23
Relationship status (single)	2.10	0.32 to 13.31	0.42	32.40
Sex (male)	1.21	0.21 to 7.46	0.83	31.95
6MWTD (m)	1.00	0.99 to 1.01	0.52	32.63
Waitlist time (weeks)	1.01	0.96 to 1.06	0.78	32.76

BIC = Bayesian information criterion; BMI = body mass index; CI = confidence interval; FEV_1 = forced expiratory volume in 1s; OR = odds ratio; 6MWTD = six-minute walk test distance.
For this time period, none of the patients with academic education were unemployed post-transplant (i.e. a zero entry in the corresponding cross tabulation). Therefore, associations between education and pre-employment status with post-employment status could not be computed.

Table S6: Results from univariate linear models for work percentage within the first year post-transplant.

	Coefficient	95% CI	p-value	BIC
Age (years)	−0.26	−0.88 to 0.35	0.76	615.40
FEV_1 (%)	0.08	−0.02to 0.35	0.78	616.41
BMI (kg/m²)	−0.42	−2.02 to 1.18	0.54	615.10
Education (academic)	8.77	−3.08 to 20.62	0.05	611.49
Living status (alone)	−5.48	−16.13 to 5.17	0.27	614.23
Pre-employment status (employed)	13.34	3.52 to 23.17	0.01	608.60
Relationship status (single)	−0.01	−8.99 to 8.97	0.66	615.30
Sex (male)	4.63	−5.43 to 14.69	0.45	614.91
6MWTD (m)	−0.01	−0.06 to 0.04	0.73	615.37
Waitlist time (weeks)	−0.02	−0.14 to 0.11	0.49	615.01

BIC = Bayesian information criterion; BMI = body mass index; CI = confidence interval; FEV_1 = forced expiratory volume in 1s; 6MWTD = six-minute walk test distance.
The best model for this time period, i.e., yielding the smallest BIC value (608.60), was based on pre-employment status alone.

Table S7: Results from univariate linear models for work percentage one to three years post-transplant.

	Coefficient	95% CI	p-value	BIC
Age (years)	−1.09	−1.95 to −0.24	0.01	653.02
FEV_1 (%)	0.19	−0.22 o 0.61	0.36	658.35
BMI (kg/m²)	−2.18	−4.55 to 0.20	0.07	655.22
Education (academic)	20.87	3.50 to 38.24	0.02	654.73
Living status (alone)	−12.30	−30.48 to 5.89	0.18	657.50
Pre-employment status (employed)	25.64	11.51 to 39.77	0.00054	641.32
Relationship status (single)	3.83	−11.41 to 19.08	0.62	657.66
Sex (male)	−3.92	−19.04 to 11.20	0.61	658.43
6MWTD (m)	0.01	−0.07 to 0.08	0.82	658.50
Waitlist time (weeks)	0.17	−0.01 to 0.35	0.07	655.43

BIC = Bayesian information criterion; BMI = body mass index; CI = confidence interval; FEV_1 = forced expiratory volume in 1s; 6MWTD = six-minute walk test distance.
The best model for this time period, i.e., yielding the smallest BIC value (641.32), was based on pre-employment status alone.

Table S8: Results from univariate linear models for work percentage three to five years post-transplant.

	Coefficient	95% CI	p-value	BIC
Age (years)	−1.09	−2.11 to 0.07	0.04	467.12
FEV$_1$ (%)	−0.11	−0.63 to 0.42	0.68	470.77
BMI (kg/m^2)	−2.39	−5.20 to 0.42	0.09	468.00
Education (academic)	25.45	5.97 to 44.93	0.01	466.93
Living status (alone)	−13.34	−35.33 to 8.65	0.23	471.09
Pre-employment status (employed)	30.95	14.62 to 47.27	0.00036	454.85
Relationship status (single)	3.34	−14.57 to 21.24	0.71	471.63
Sex (male)	0.72	−17.44 to 18.89	0.94	471.74
6MWTD (m)	0.01	−0.08 to 0.09	0.89	472.03
Waitlist time (weeks)	0.15	−0.10 to 0.40	0.23	470.48

BIC = Bayesian information criterion; BMI = body mass index; CI = confidence interval; FEV$_1$ = forced expiratory volume in 1s; 6MWTD = six-minute walk test distance
The best model for this time period, i.e., yielding the smallest BIC value (454.85), was based on pre-employment status alone.

Table S9: Results from univariate linear models for work percentage five to ten years post-transplant.

	Coefficient	95% CI	p-value	BIC
Age (years)	−1.13	−2.37 to 0.01	0. 07	347.18
FEV$_1$ (%)	−0.17	−0.79 to 0.44	0.57	349.96
BMI (kg/m^2)	−1.64	−5.13 to 1.84	0.35	349.64
Education (academic)	20.28	−2.06 to 42.62	0.07	347.98
Living status (alone)	−21.01	−44.13 to 2.12	0.07	346.97
Pre-employment status (employed)	32.15	13.07 to 50.60	0.0011	333.17
Relationship status (single)	−1.34	−21.35 to 18.67	0.89	349.99
Sex (male)	−9.38	−29.73 to 10.97	0.36	349.99
6MWTD (m)	−0.04	−0.13 to 0.05	0.38	349.10
Waitlist time (weeks)	−0.01	−0.36 to 0.34	0.97	350.07

BIC = Bayesian information criterion; BMI = body mass index; CI = confidence interval; FEV$_1$ = forced expiratory volume in 1s; 6MWTD = six-minute walk test distance
The best model for this time period, i.e., yielding the smallest BIC value (331.44), was based on pre-employment status and living status.

Table S10: Results from univariate linear models for work percentage more than ten years post-transplant.

	Coefficient	95% CI	p-value	BIC
Age (years)	−1.24	−2.99 to 0.51	0.16	215.96
FEV$_1$ (%)	−0.06	−0.80 to 0.68	0.86	217.41
BMI (kg/m^2)	−2.58	−6.12 to 0.96	0.15	216.15
Education (academic)	31.68	2.35 to 61.02	0.04	214.92
Living status (alone)	−27.45	−64.67 to 9.76	0.14	215.13
Pre-employment status (employed)	21.14	−4.90 to 47.18	0.11	210.98
Relationship status (single)	6.47	−23.87 to 36.81	0.66	217.31
Sex (male)	1.38	−24.94 to 27.70	0.92	217.42
6MWTD (m)	−0.02	−0.16 to 0.13	0.80	217.34
Waitlist time (weeks)	0.27	−0.36 to 0.91	0.38	216.93

BIC = Bayesian information criterion; BMI = body mass index; CI = confidence interval; FEV$_1$ = forced expiratory volume in 1s; 6MWTD = six-minute walk test distance
The best model for this time period, i.e., yielding the smallest BIC value (210.98), was based on pre-employment status alone.

Table S11: Model selection of the time-dependent factors to include in the mixed logistic model for work status.

	CLAD	Cancer	Dialysis	BIC
Model 1	0	0	1	312.24
Model 2	0	1	0	315.21
Model 3	1	0	0	316.25
Model 4	0	1	1	316.79
Model 5	1	0	1	317.78
Model 6	1	1	0	320.85
Model 7	1	1	1	321.87

BIC = Bayesian information criterion; CLAD = chronic lung allograft dysfunction; 0 = factor not present; 1= factor present
Model 1 including dialysis yielded the lowest BIC value. Therefore, dialysis was chosen as covariate for the final mixed logistic model.

Table S12: Model selection of the time-dependent factors to include in the mixed linear model for work percentage.

	CLAD	Cancer	Dialysis	BIC
Model 1	0	0	1	2745.98
Model 2	0	1	0	2749.39
Model 3	1	0	0	2751.39
Model 4	0	1	1	2751.40
Model 5	1	0	1	2753.44
Model 6	1	1	0	2754.98
Model 7	1	1	1	2757.03

BIC = Bayesian information criterion; CLAD = chronic lung allograft dysfunction; 0 = factor not present; 1= factor present
Model 1 including dialysis yielded the lowest BIC value. Therefore, dialysis was chosen as covariate for the final mixed logistic model.