

# Relevanz von RV-Funktion und Trikuspidalinsuffizienz



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## Fragestellung

- Herzzentrum Luzern 2011 - 2020:  
175 Patient:innen mit MitraClip®
- Welche Patient:innen haben eine gute Prognose?



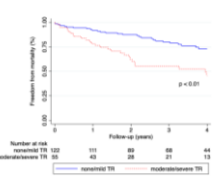
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## Prädiktoren für Mortalität

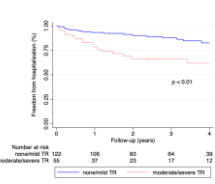
	Univariate		Multivariate	
	HR (95% CI)	p-Value	HR (95% CI)	p-Value
<b>Basalmerkmale</b>				
Age (per 10y)	1.38 (1.17-1.32)	< 0.01	1.08 (0.77-1.53)	0.66
Female sex	0.88 (0.51-1.42)	0.64	-	-
BMI	0.95 (0.90-1.00)	0.06	-	-
Coronary artery disease	1.27 (0.79-2.05)	0.31	-	-
Hypertension	1.14 (0.67-1.93)	0.63	-	-
Dyslipidaemia	1.48 (0.82-2.54)	0.18	-	-
Pulmonary disease	1.32 (0.78-2.23)	0.30	-	-
Atrial fibrillation	1.72 (1.10-2.68)	0.02	1.23 (0.70-2.17)	0.47
Oral anticoagulants	1.49 (0.93-2.40)	0.10	-	-
Diastolic cardiomyopathy	1.62 (0.79-3.34)	0.20	-	-
NHVA (per class)	1.61 (1.15-2.24)	< 0.01	1.29 (0.85-1.97)	0.24
→ Hemoglobin (per 10 g/l)	1.69 (0.99-2.94)	< 0.01	0.75 (0.53-1.06)	< 0.01
→ GFR (per 10 ml/min)	0.87 (0.78-0.98)	0.01	1.03 (0.90-1.17)	0.66
<b>Basalmerkmale/operativ</b>				
LVF (per 10%)	0.99 (0.98-1.00)	0.20	-	-
LVSD (per mm)	1.00 (0.96-1.04)	0.36	-	-
LVSDV (per ml)	1.00 (0.99-1.00)	0.68	-	-
PAOP (per mmHg)	1.01 (0.99-1.02)	0.20	-	-
AVCI (per mmHg)	1.03 (0.80-1.33)	0.80	-	-
Stenotriale MR	1.03 (0.64-1.64)	0.91	-	-
→ Moderate/severe TR	2.61 (1.63-4.19)	< 0.01	3.34 (1.36-8.03)	< 0.01

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## Mortalität



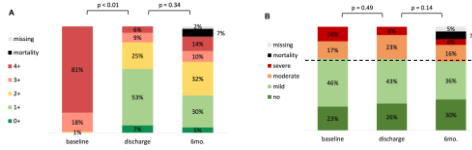
## Re-Hospitalisation



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Mitralsuffizienz

Trikuspidalsuffizienz



Fazit 1:

- Schlechtere Prognose bei Patient:innen mit Trikuspidalsuffizienz
- Keine Reduktion der Trikuspidalsuffizienz durch MitraClip (trotz Reduktion von PASP)

Die «Gretchenfrage»



... RV-Funktion?

Echo-Parameter

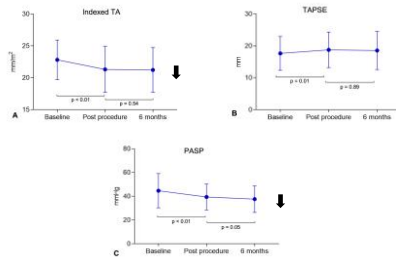
Baseline echocardiography

- LVEF
- LVEDD
- LVEDV

- Mitral gradient
- Functional MR
- Moderate/severe TR

- RV dysfunction
- TA dilation
- Pulmonary Hypertension
- RVC > 0.4

- TASPE ≤ 17mm
- Indexed TA > 21 mm/m<sup>2</sup>
- PASP ≥ 40mmHg
- TAPSE / PASP ratio



Mortalität und Re-Hospitalisation

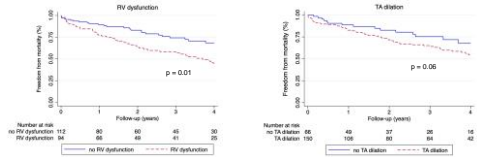


	Univariate		Multivariable	
	HR (95% CI)	p-Value	HR (95% CI)	p-Value
<b>Baseline echocardiography</b>				
LVEF (per 10%)	0.86 (0.79-0.94)	0.005	0.94 (0.84-1.05)	0.258
LVEDD (per 10mm)	0.94 (0.74-1.19)	0.815	-	-
LVEDV (per 10ml)	1.02 (0.89-1.05)	0.250	-	-
M2-sewing	1.05 (0.86-1.28)	0.607	-	-
Functional MR	1.36 (0.93-2.00)	0.116	-	-
RV dysfunction	1.39 (1.18-2.04)	0.018	1.36 (0.91-2.04)	0.133
TA dilation	1.34 (0.89-2.02)	0.161	-	-
Pulmonary Hypertension	1.61 (1.27-2.01)	0.022	1.11 (0.71-1.73)	0.655
PH > 1.8	0.68 (0.46-1.00)	0.052	-	-
Moderate/severe TR	2.38 (1.46-3.93)	< 0.001	1.83 (1.18-2.84)	0.007

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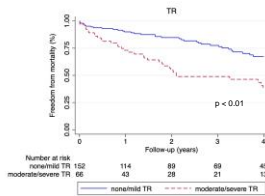
Mortalität und Re-Hospitalisation



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Mortalität und Re-Hospitalisation



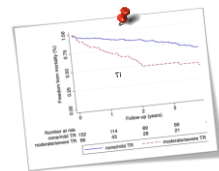
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Fazit



- ✓ Pulmonal-arterieller Druck ↓
- ✓ RV Funktion und Dimension ↑
- ✓ Keine Reduktion Trikuspidalinsuffizienz
- ✓ Schlechte Prognose bei Trikuspidalinsuffizienz



... die „vergessene Klappe“ spielt eine Rolle!

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### Bildquellen

- <https://www.verwellhealth.com/right-ventricle-anatomy-function-and-dysfunction-5189306>
- <https://www.cardiovascular.abbott/mi/en/hcp/products/structural-heart/transcatheter-valve-solutions/mitralclip.html>
- <https://blog.superext.ch/2017/02/wenn-es-brenzlig-wird-fragen-sie-gretchen-und-ihr-bauchgefuehl/>
- <https://thoracickey.com/two-dimensional-and-three-dimensional-echocardiographic-evaluation-of-the-right-ventricle/>

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