

Conference Theme

Global Approach to Renal Care Innovation-
Balancing Compassion and Health Technologies



Factors Influencing Body Balance in Haemodialysis Patients

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47th EDTNA/ERCA International Conference | Genoa | Italy | 15-18 September 2018

Presentation outline

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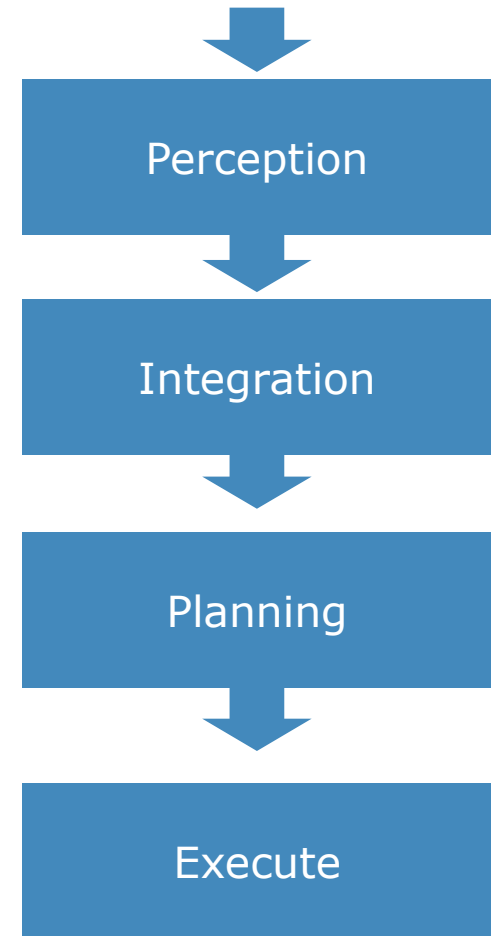
4 Results

5 Conclusion

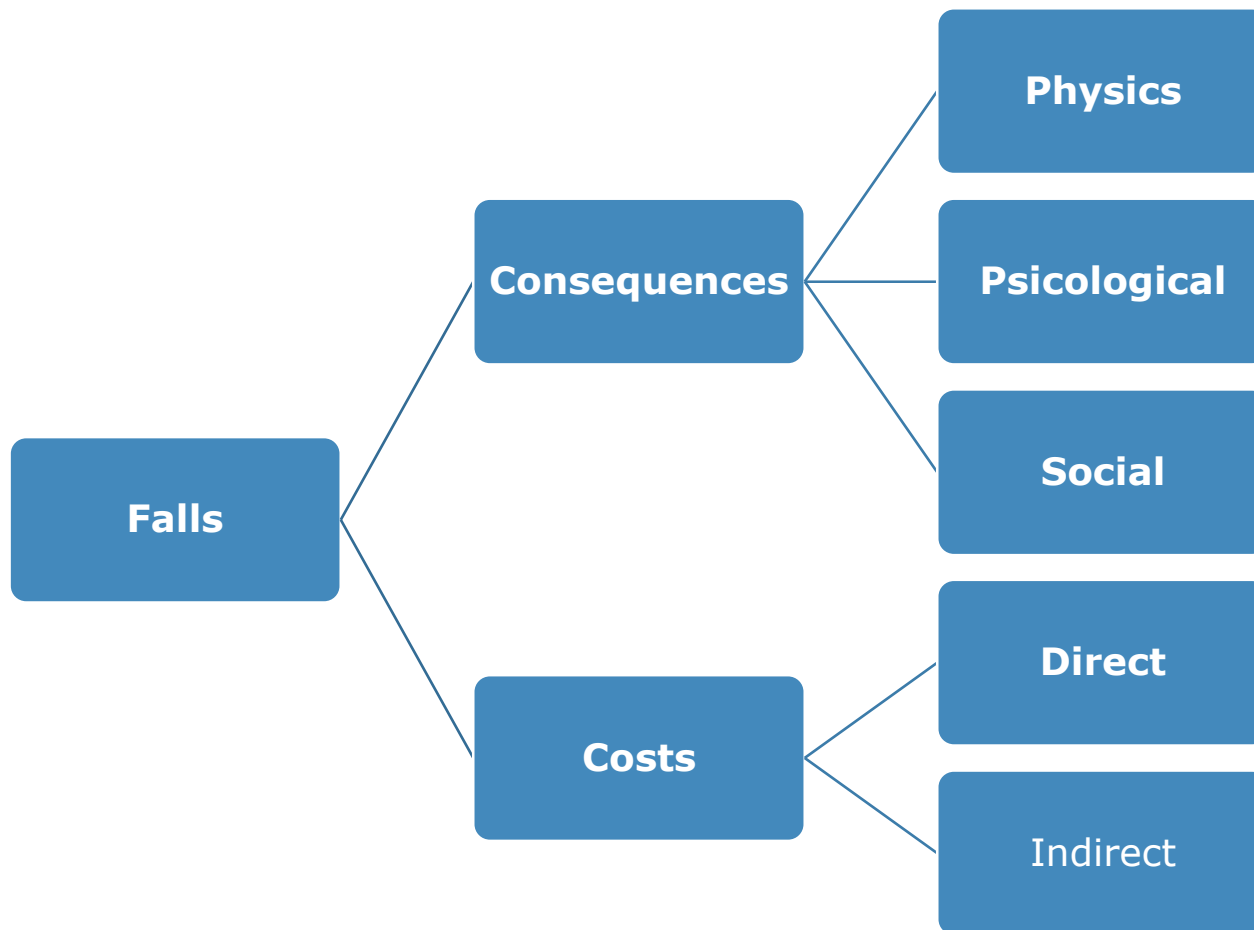
Introduction

Corporal Balance:

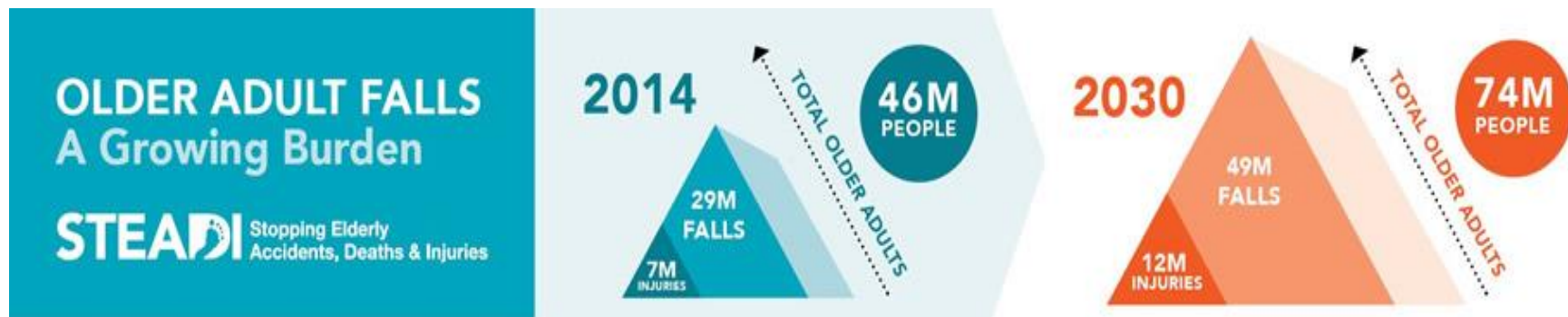
- **Interaction between the sensitive and motor system**
- **Maintenance of orthostatic position**
- **Structures involved:**
 - Vestibular system
 - Vision
 - Somatosensitive system



Introduction



Introduction



https://www.cdc.gov/homeandrecreationalafety/falls/community_preventfalls.html

Injury pyramid for falls in people aged 65 and above in the EU:



- **Approximately 36,000 older people are reported to be fatally injured from falls every year in the EU**
- **1,443,000 fall-related injuries are admitted to hospital each year (40 x number of deaths)**
- **2,314,000 older people attend emergency departments with fall-related injuries each year (65 x number of deaths)**

https://eupha.org/repository/sections/ipsp/Factsheet_falls_in_older_adults_in_EU.pdf

Introduction

- Cost for falls \$50 billion.
- Each year, millions of people 65 and older are treated in emergency departments because of falls.
- Over 800,000 patients a year are hospitalized because of a fall injury, most often because of a broken hip or head injury.
- Fall injuries are among the 20 most expensive medical conditions.
- The average hospital cost for a fall injury is over \$30,000.
- The costs of treating fall injuries goes up with age.

(CDC, 2017)

<https://www.cdc.gov/homeandrecreationalafety/falls/fallcost.html>

Objectives

- Evaluate the influence of age on Body Balance in Haemodialysis patients
- Evaluate the influence of Body Composition on Body Balance in haemodialysis patients
- Evaluate the influence of blood pressure on body balance in haemodialysis patients
- Evaluate the influence of Diabetes Mellitus on body Balance in haemodialysis patients

Participants

- **Inclusion Criterion:**

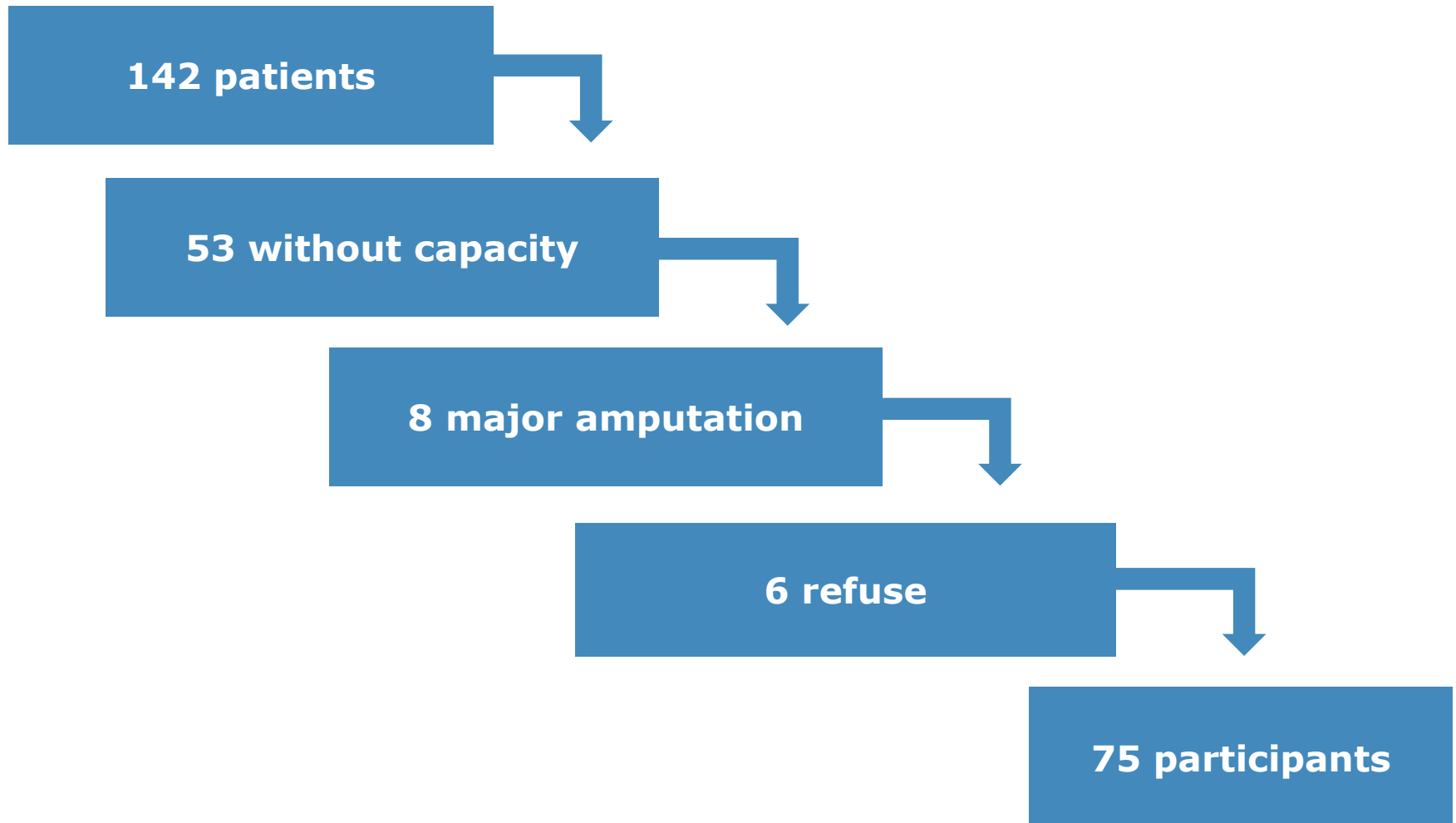
- Ability to perform the Single Leg Stance Test

- **Exclusion Criterion:**

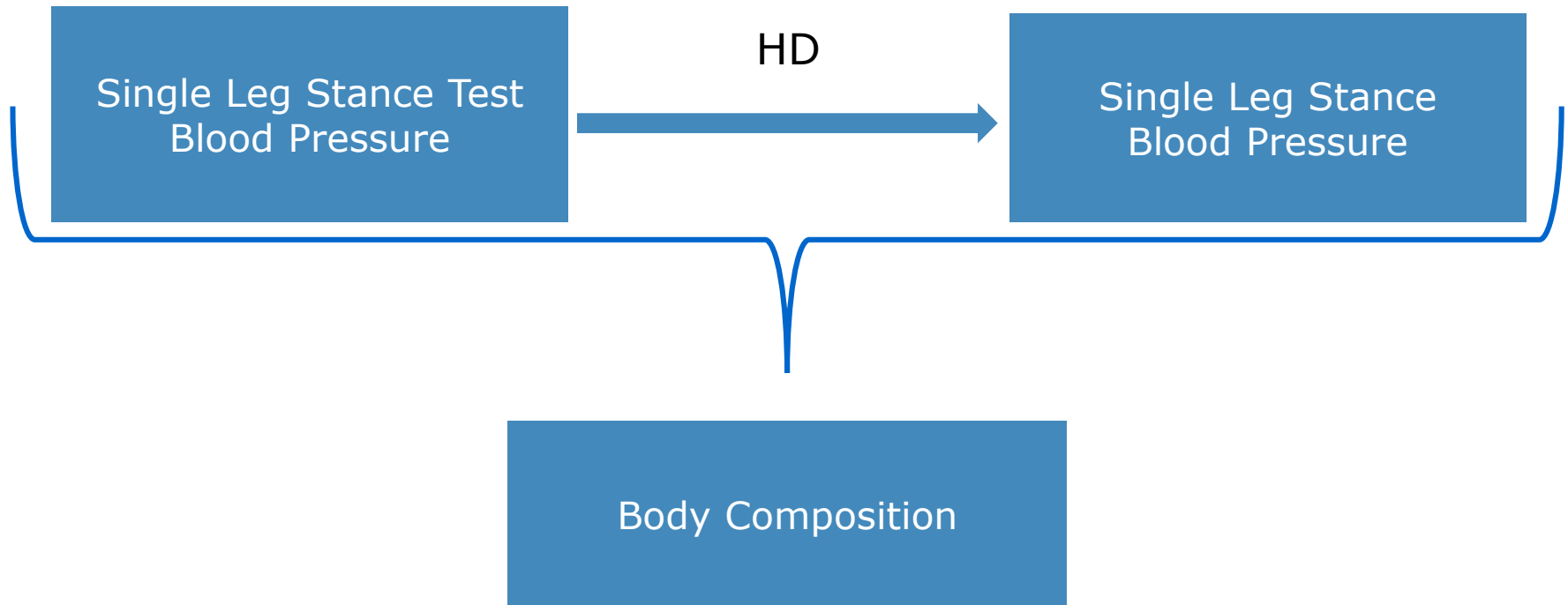
- Major amputation



Methods



Methods

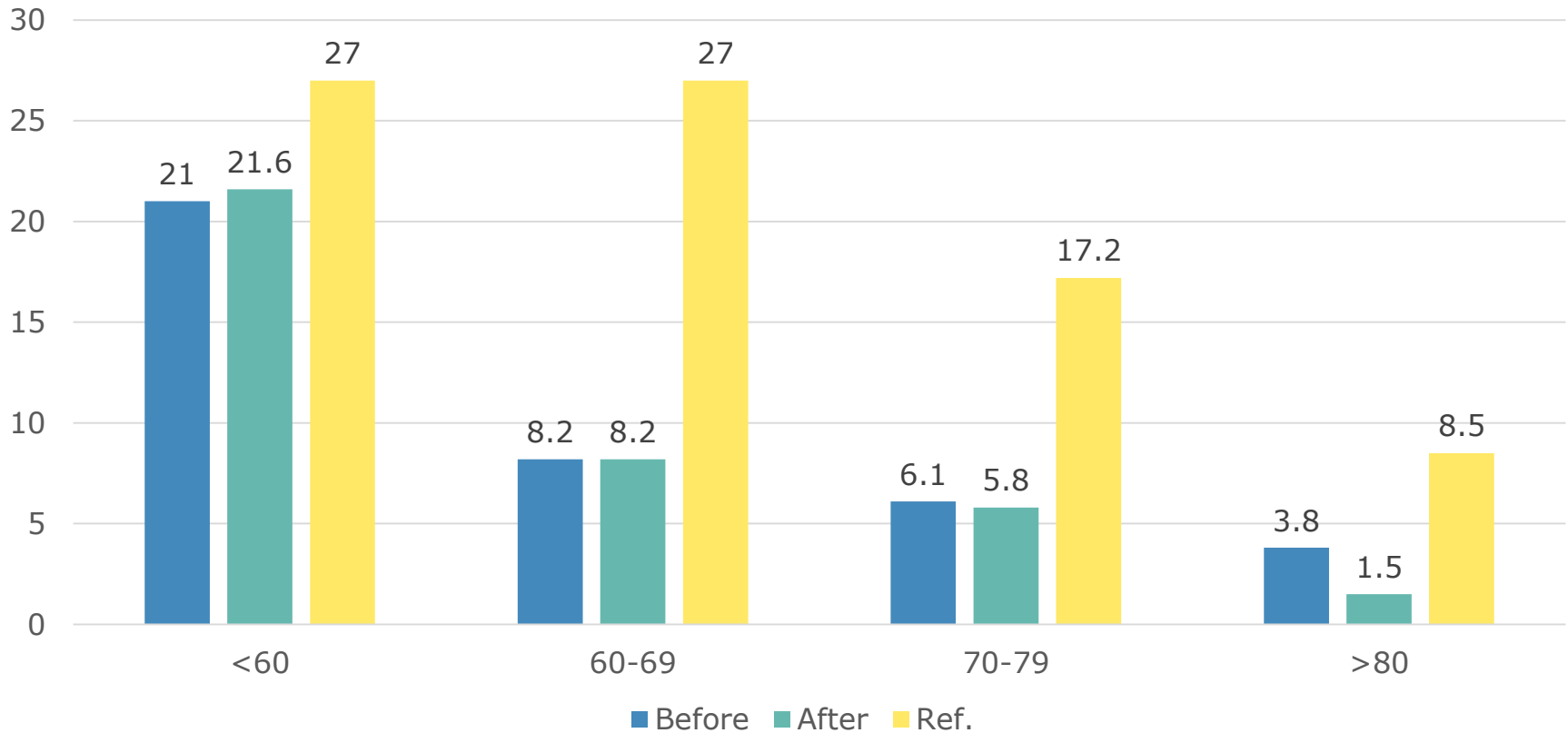


Results

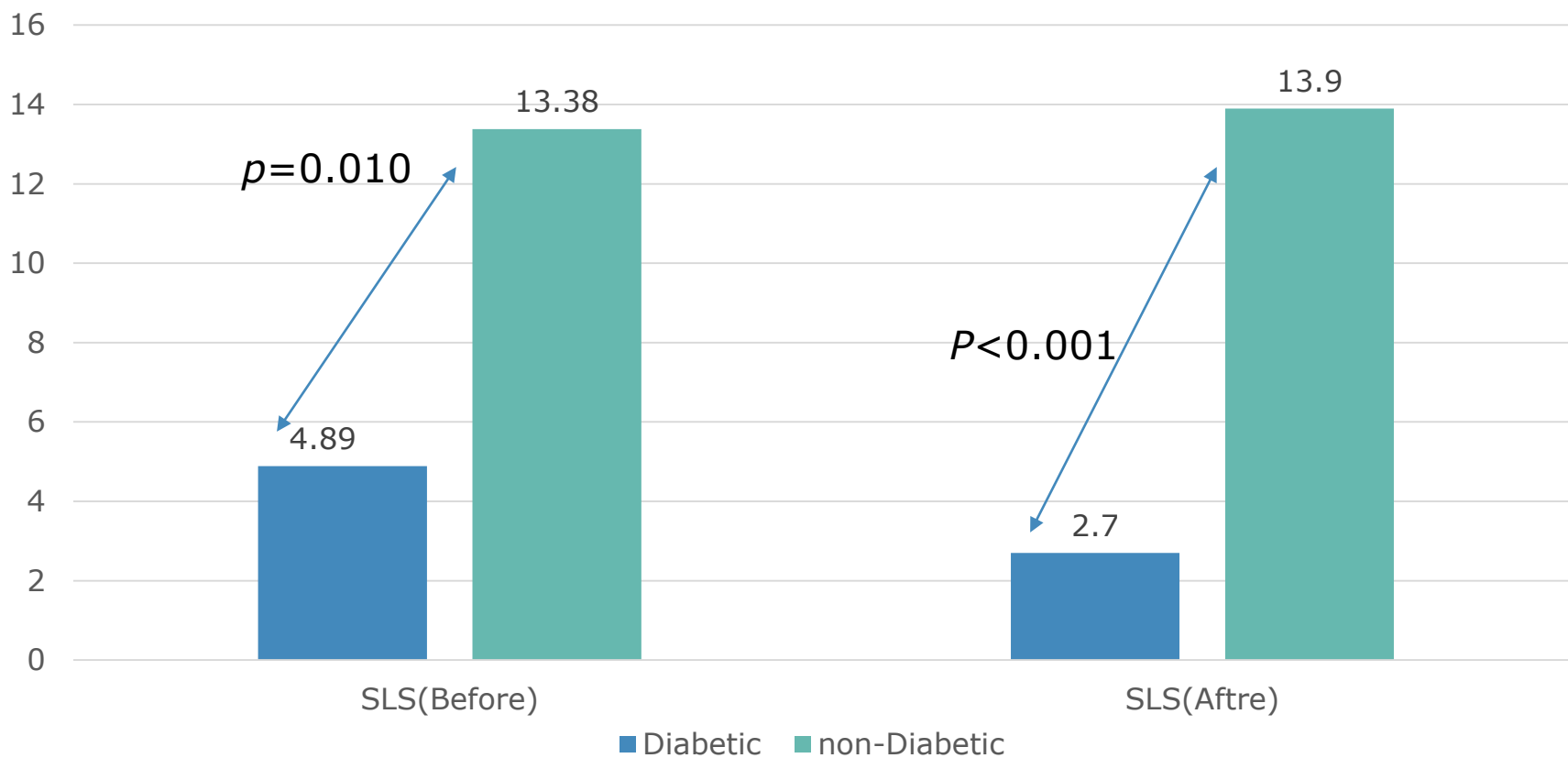
Baseline characteristics of the study population

Variables		n	%
Gender	Female	35	46.7
	Male	40	53.3
Age (years)		66.7 ± 13.8	
Time make HD(month)		63.8 ± 69	
Diabetics	With	24	32
	Without	51	68


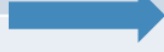


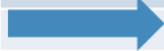
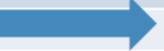
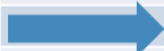
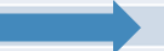




Performance in SLST for ages



Diabetic and non-Diabetic patients comparison



Results

		SLS(before)	SLS(after)
Age	Pearson correlation	- ,460**	- ,450**
	Sig(bilateral)	 ,000	 ,000
	N	75	75
BC	Pearson correlation	- ,288*	- ,240*
	Sig(bilateral)	 ,012	 ,038
	N	75	75
LTI	Pearson correlation	,426**	,446**
	Sig(bilateral)	 ,000	 ,000
	N	75	75
FTI	Pearson correlation	- ,480	- ,463
	Sig(bilateral)	 ,000	 ,000
	N	75	75
Sis. (before)	Pearson correlation	,170	,135
	Sig(bilateral)	,148	,253
	N	74	74
Dias.(before)	Pearson correlation	,387**	,367**
	Sig(bilateral)	 ,001	 ,001
	N	74	74
Sis.(after)	Pearson correlation	,136	,075
	Sig(bilateral)	,249	,524
	N	74	74
Dias(after)	Pearson correlation	,393**	,337**
	Sig(bilateral)	 ,001	 ,003
	N	74	74

Conclusions

- HD patients has poor body balance
- Aging affects Body Balance in HD patients
- Body composition affects Body Balance in HD patients
- Diabetes affects Body Balance in HD patients
- Diastolic blood pressure affects Body Balance in HD patients

Conclusions

- Find strategies to improve lean muscle and Diastolic Blood Pressure;
- Find strategies to prevent falls in this population;
- In this population, patients that are elderly, are diabetic, have hypotension and an impaired lean tissue are a priority.

**Thank You Very Much
for Your Attention!**

Acknowledgments

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