

# Causes of mortality and survival rates in a community-based sample of aging adults with Ds

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## Introduction

While respiratory failure has been the most consistent and leading cause of death in adults with Down syndrome (Ds), the impact of dementia and non-congenital cardiovascular disease has increased over time. Given the emerging large cohort of aging adults with Ds, updated information on causes of mortality is needed.

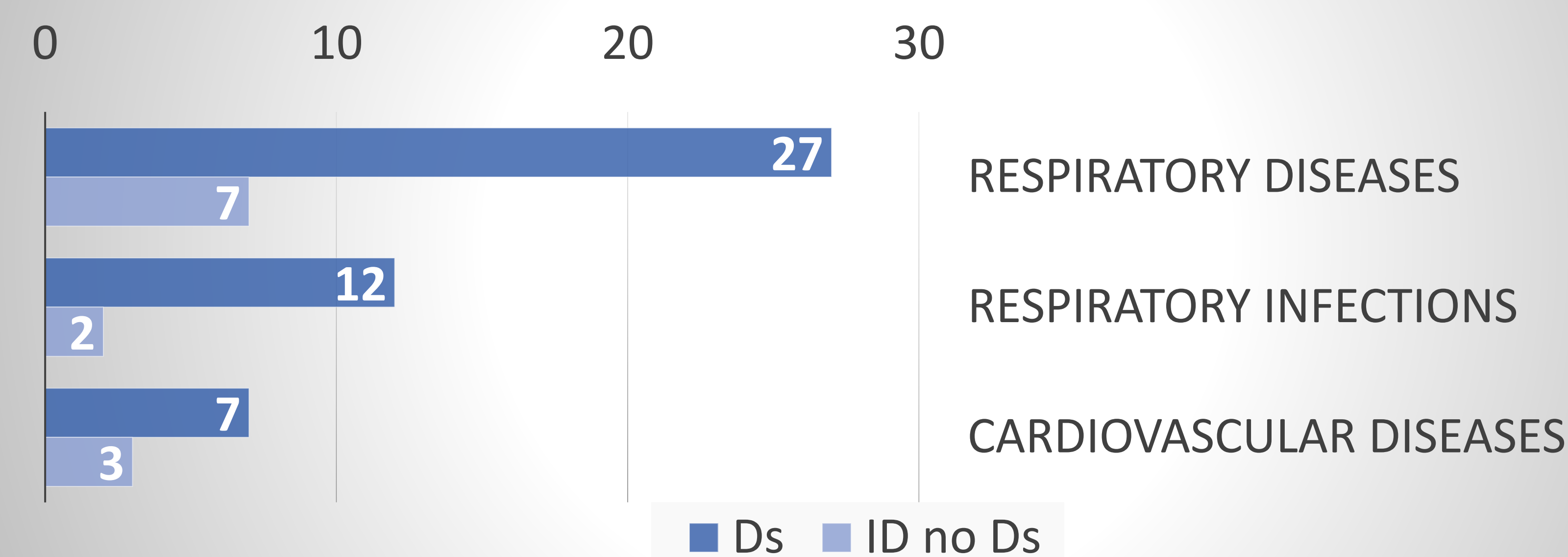
## Aims

This study aimed to examine causes of mortality and survival rates in a contemporary cohort of ageing adults with Ds.

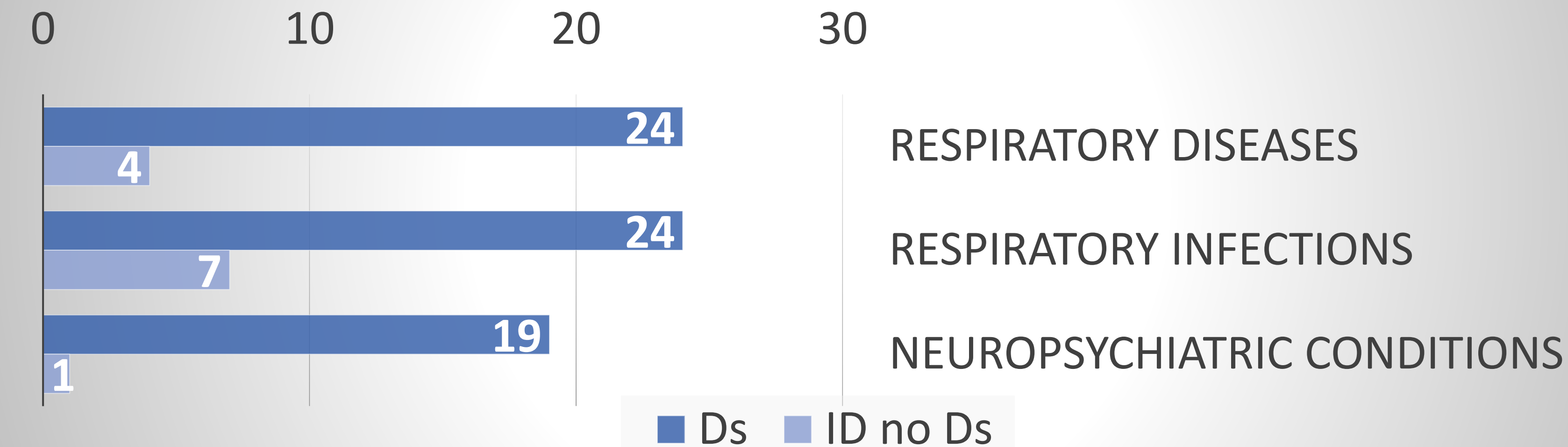
## Design and Methods

- This secondary analysis utilized baseline and 10-year follow up data on mortality and survival from the longitudinal Healthy Ageing and Intellectual Disabilities (HA-ID) study, comparing 149 adults with Ds >50 years with 149 adults with intellectual disability (ID) without Ds, matched by sex, age, level of ID.
- Prevalence of immediate and primary causes of death was reported in ICD-10 codes and categorized with the WHO Mortality database.
- Non-parametric survival curves were created using the Kaplan–Meier method (Kaplan and Meier 1958) and tested with log-rank test.

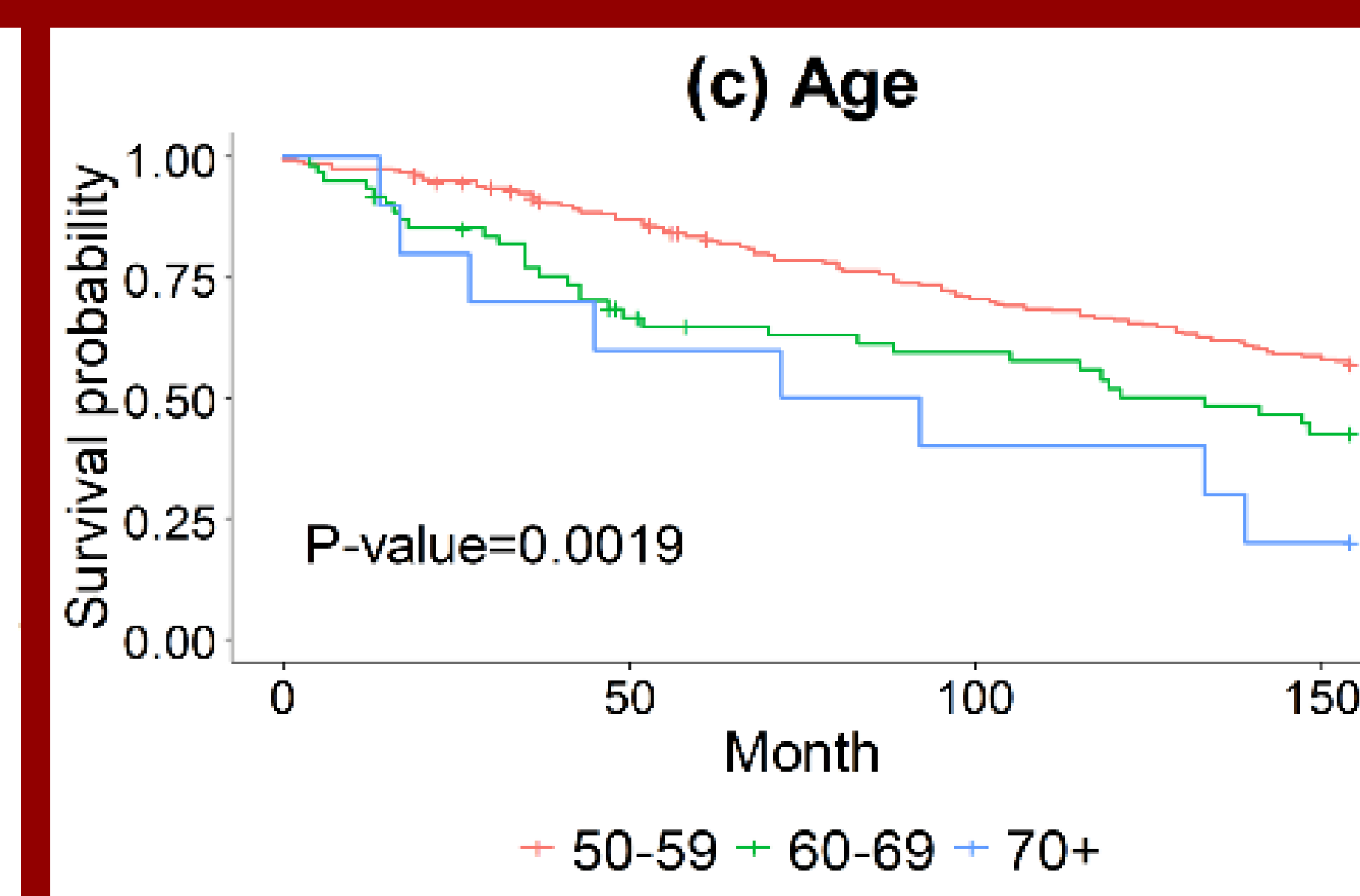
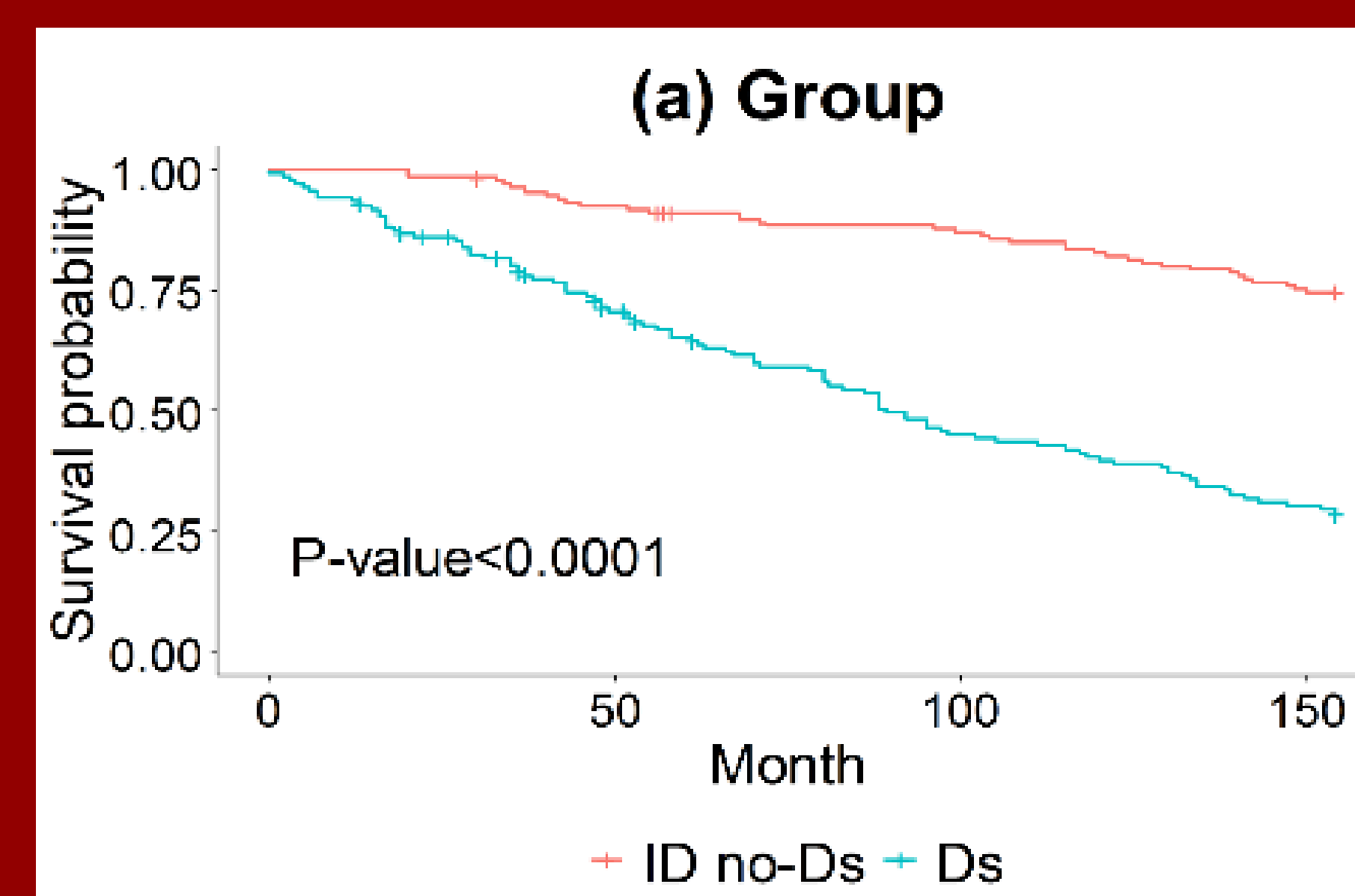
## Top 3 Immediate causes in Ds



## Top 3 Underlying causes in Ds



Causes of mortality and survival rates are different in adults with Ds, with large contributions of cardiovascular disease and dementia.



## Results

- 107 adults with Ds and 48 adults with ID no Ds died.
- Many causes of death were missing (Ds n=29, ID no Ds n=19) or 'Ill-defined' (Ds n=19, ID no Ds n=4)
- Respiratory infections/disease remained the leading cause of death in adults with Ds, followed by cardiovascular disease and neuropsychiatric conditions including dementia. Adults with ID additionally had notable mortality from diabetes and cancer.
- Survival analyses demonstrated lower survival rates among ageing adults with Ds and older adults.

	Immediate cause (N = 155)		Underlying cause (N = 155)	
	Ds	ID no Ds	Ds	ID no Ds
Respiratory diseases	27	7	24	4
Respiratory infections	12	2	24	7
Cardiovascular diseases	7	3	1	3
Diabetes mellitus	3	5	1	1
Other infectious diseases	3	1	0	2
Digestive diseases	2	2	1	1
Genitourinary diseases	2	1	1	0
Malignant neoplasms	1	3	3	2
Neuropsychiatric conditions	1	0	19	1
Palliative care	1	0	0	0
Musculoskeletal diseases	0	1	0	0
Other neoplasms	0	0	0	2
Skin diseases	0	0	0	1
Other	0	0	1	0

## Discussion

- These findings highlight the important impact of cardiovascular disease and dementia on mortality in aging adults with Ds, underscoring the need for effective interventions.