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Background

There is little information on growth and fractures in boys with Duchenne Muscular Dystrophy (DMD).

Objectives

To determine the extent of growth & skeletal morbidity in a contemporary cohort of DMD in the UK.

Methods

Clinical details of 832 boys with DMD in the North Star database during the period of 2006 to 2015 from 23 centres in United Kingdom were analysed following categorisation into five age groups: A:<4.9yrs (n,113), B:5- 7.9yrs (384), C:8-10.9yrs (421), D:11-13.9yrs (299) and E:>14yrs (160). The reported fractures were classified into vertebral fractures (VF) and non-vertebral fractures (Non-VF). The results are presented as Median (Range). The probability of fractures was determined by Kaplan-Meier plot.

Results

Mobility Status at different Age Range

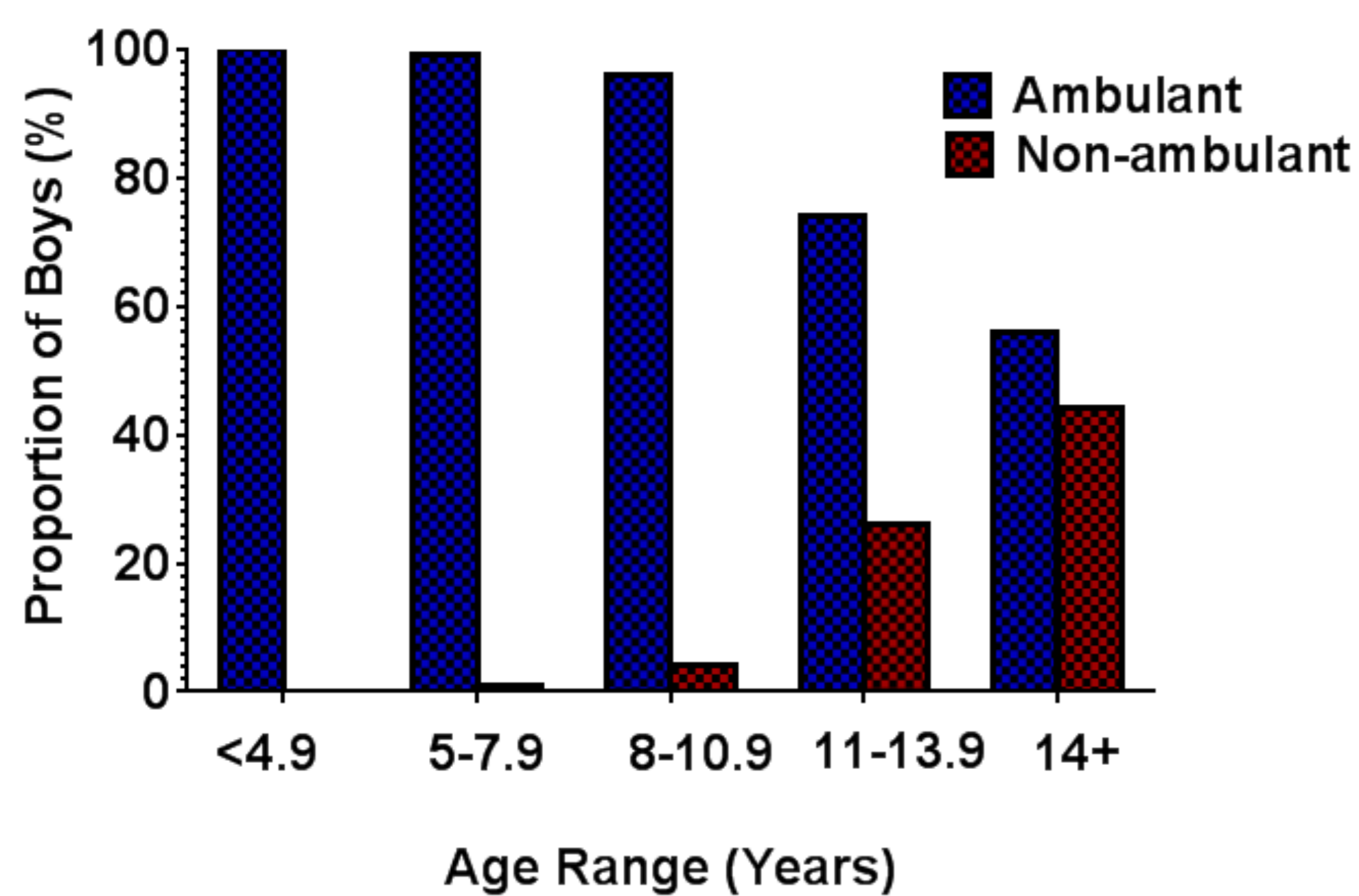


Figure 1: Mobility Status

Proportion of Boys on Steroid Therapy per Age Range

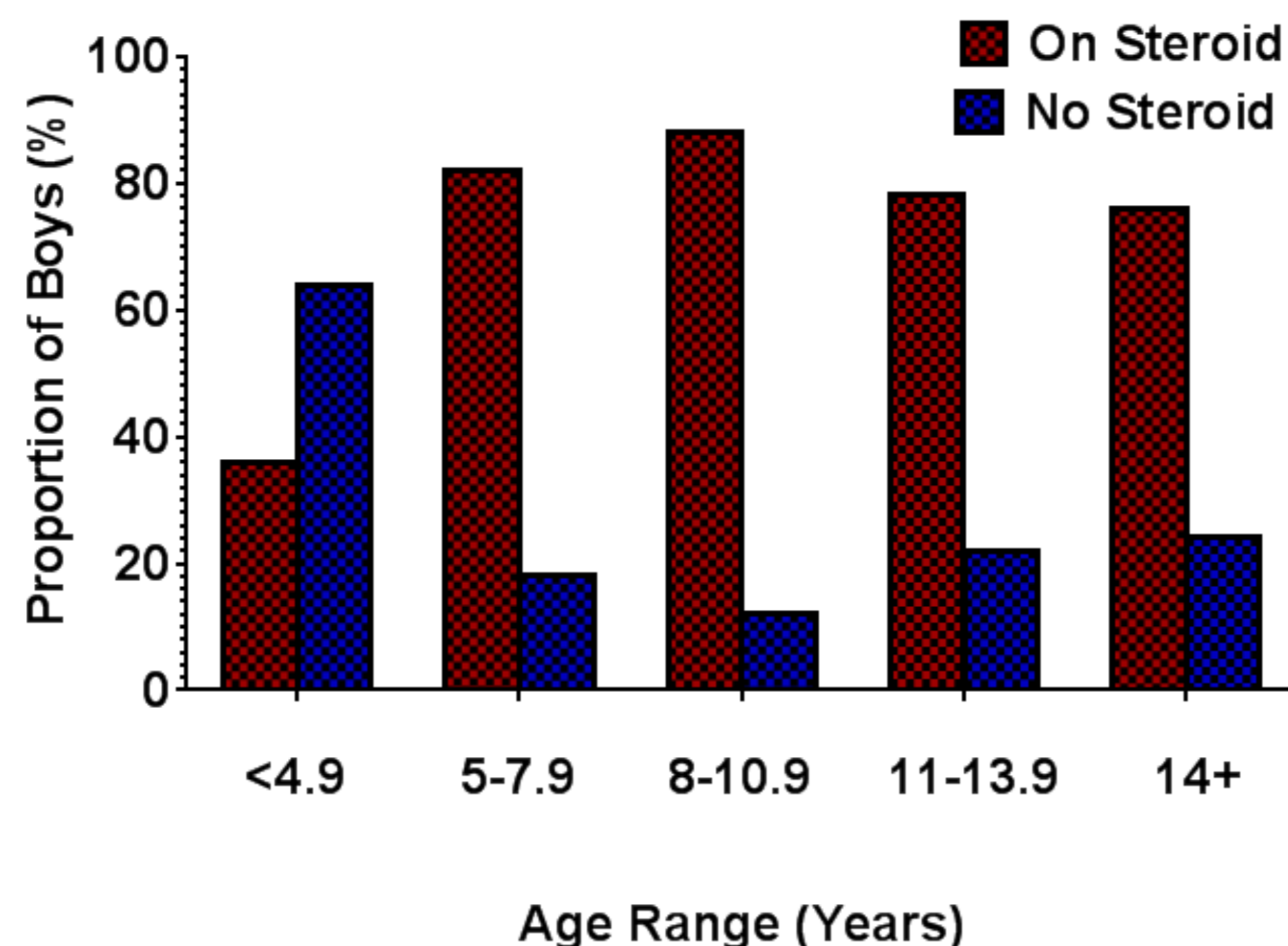


Figure 2: Glucocorticoid Therapy

Height SDS per Age Range

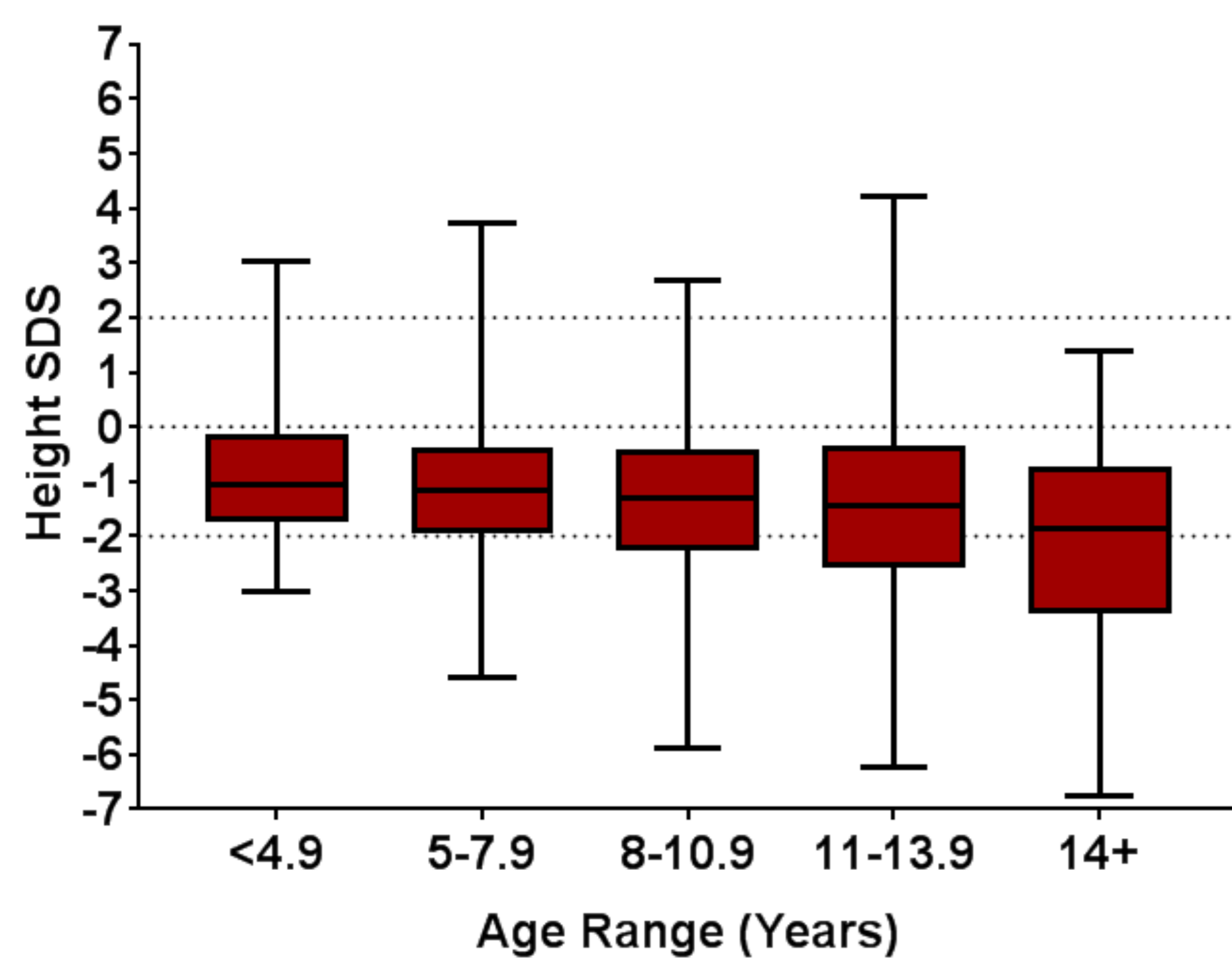


Figure 3: Height SDS

DMD boys are short even before steroid therapy

Of the 46 Steroid-naïve boys aged <4.9 years, 22% had height SDS <-2.0.

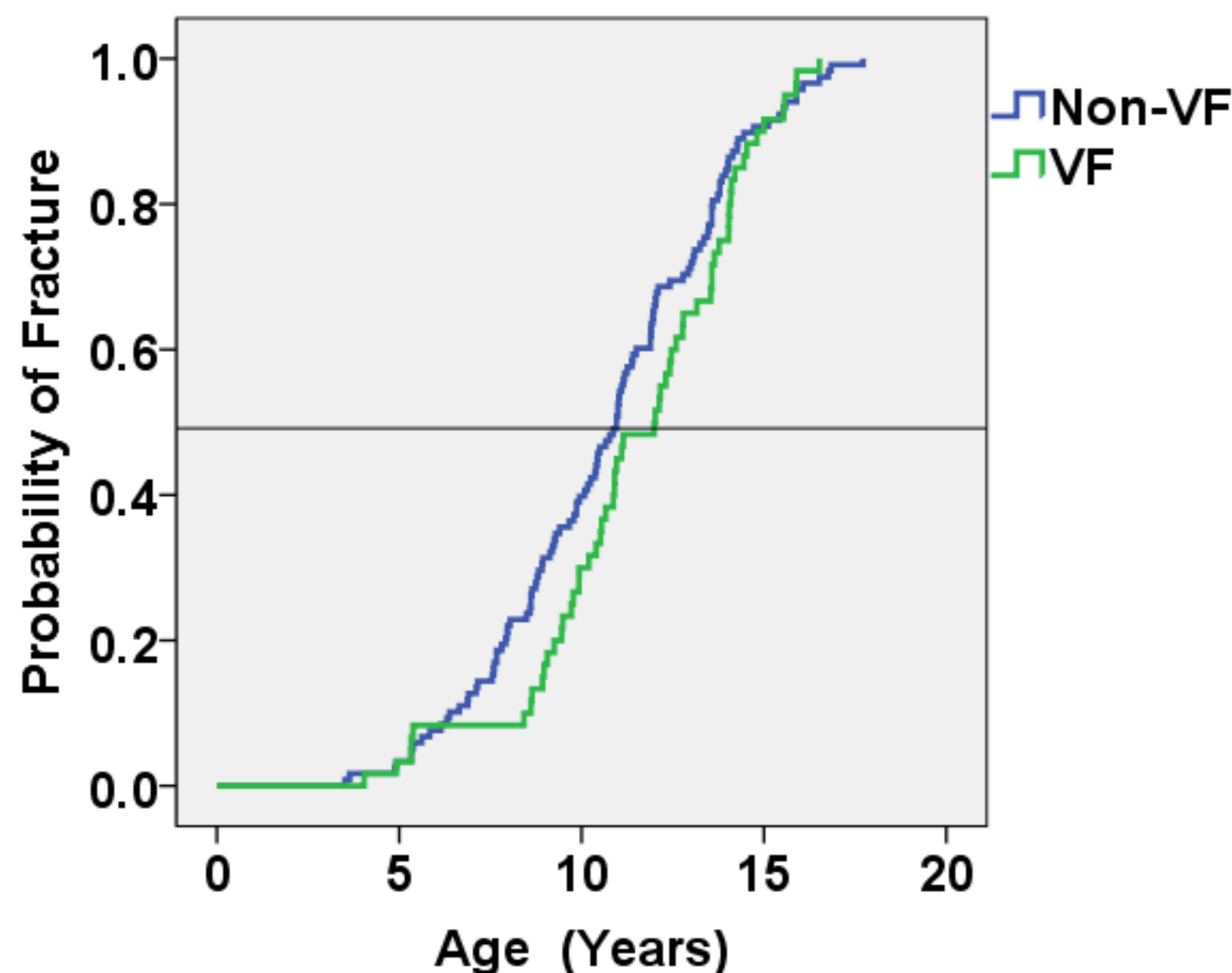


Figure 4: Probability Of Fracture (Non-VF vs. VF) Vs. Age

Disclosure Statements: The authors have nothing to disclose

Results continued

Fracture Prevalence against Age Range

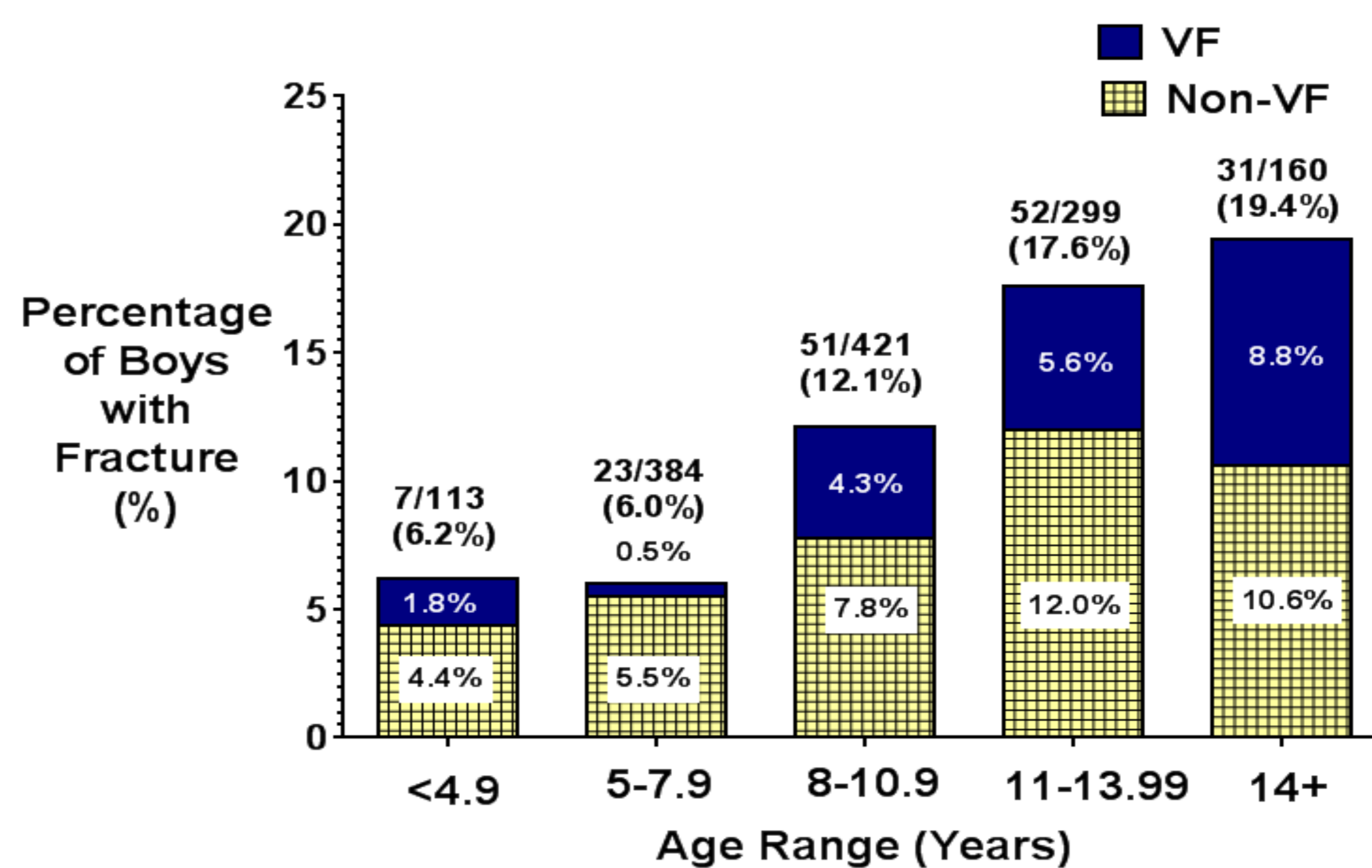


Figure 4: New Fracture (Non-VF vs. VF) In Different Age Group

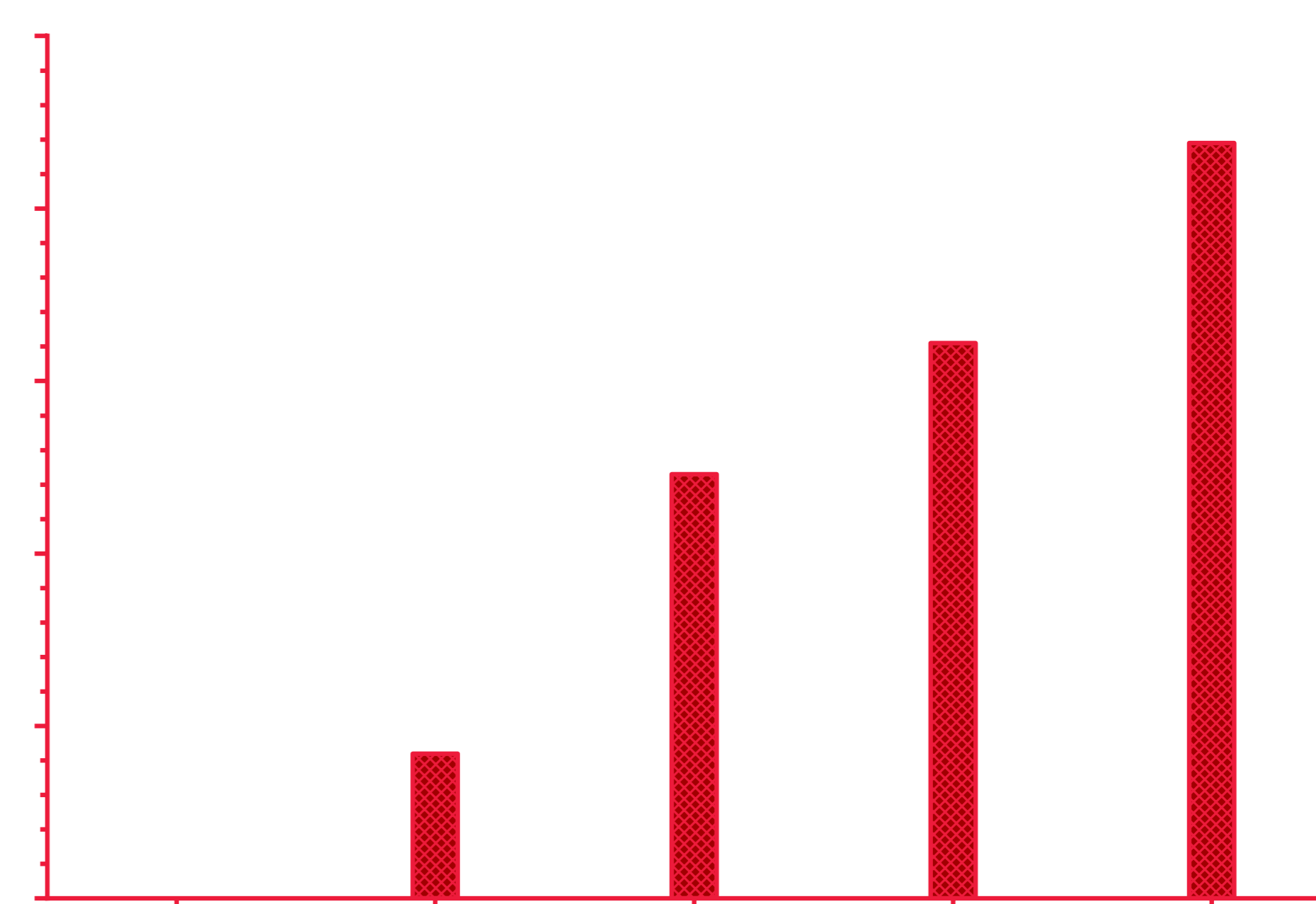


Figure 5: Back Pain In Different Age Group

Proportion of Boys with Vertebral Fracture per Age Range (Asymptomatic vs. Symptomatic VF)

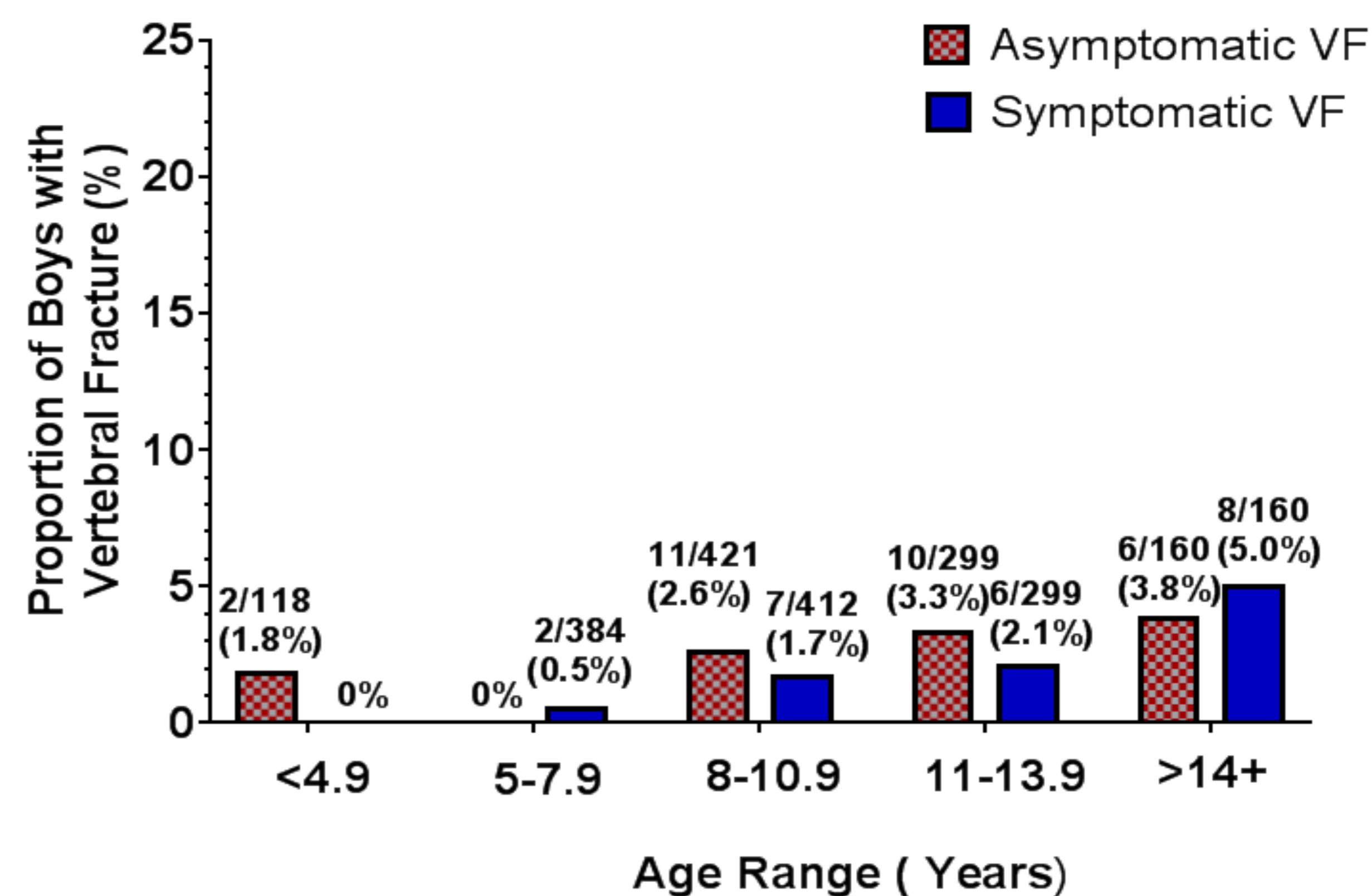


Figure 6: New VF In Different Age Group

Conclusion

In this largest cohort of boys with DMD to date with growth and fracture data,

- Short stature was already evident in 22% of young steroid-naïve boys
- VF are present across the age spectrum and the relationship between back pain and VF in this age group requires further exploration.