

Management of steroid treatment

10 days on and 10 days off

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Disclosures

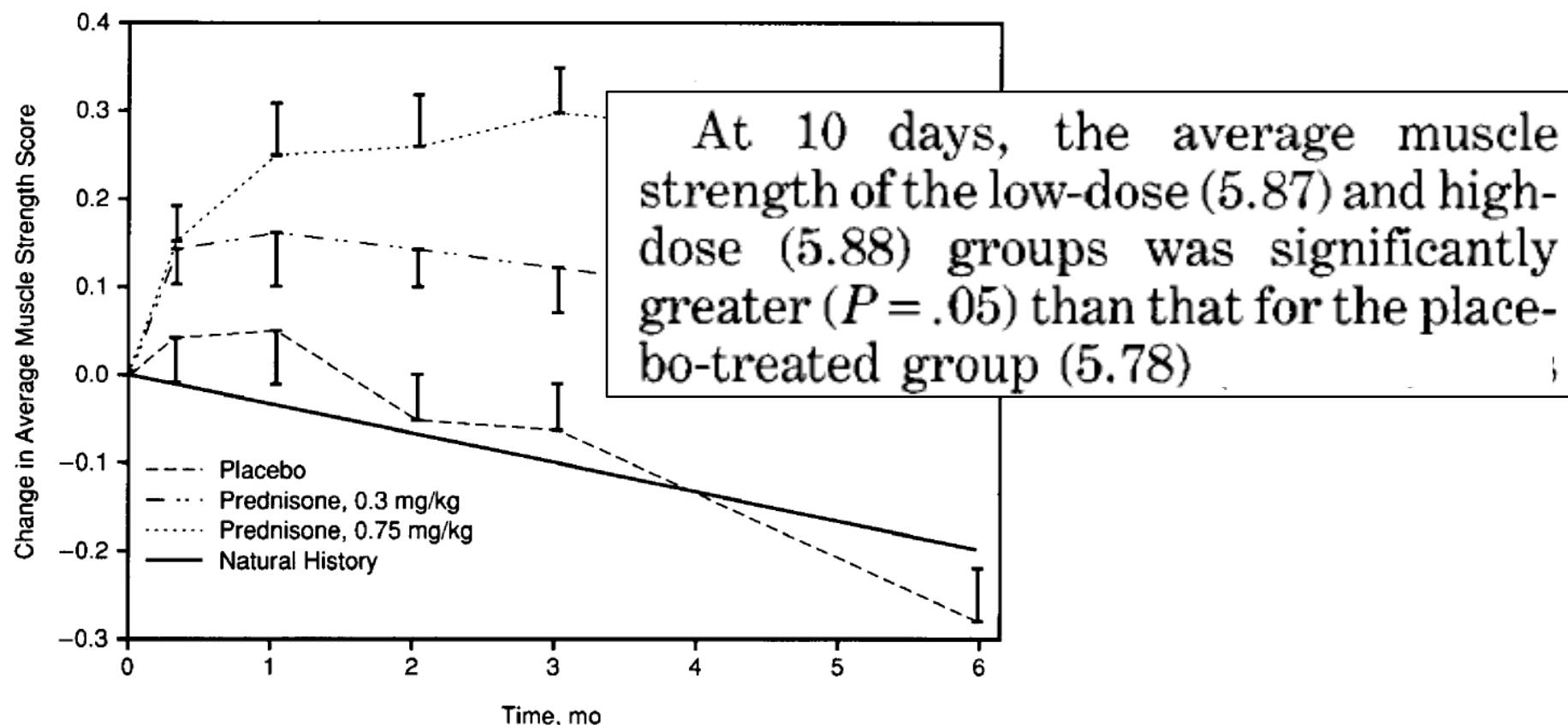
The LUMC participated in clinical trials with BioMarin, Eli-Lilly, GlaxoSmithKline Santhera Pharmaceuticals, Roche and Italfarmaco.

The department of Neurology received consultancy fees from BioMarin and Summit Therapeutics.

No personal financial arrangements or payments.

Prednisone in Duchenne Dystrophy

A Randomized, Controlled Trial Defining the Time Course and Dose Response

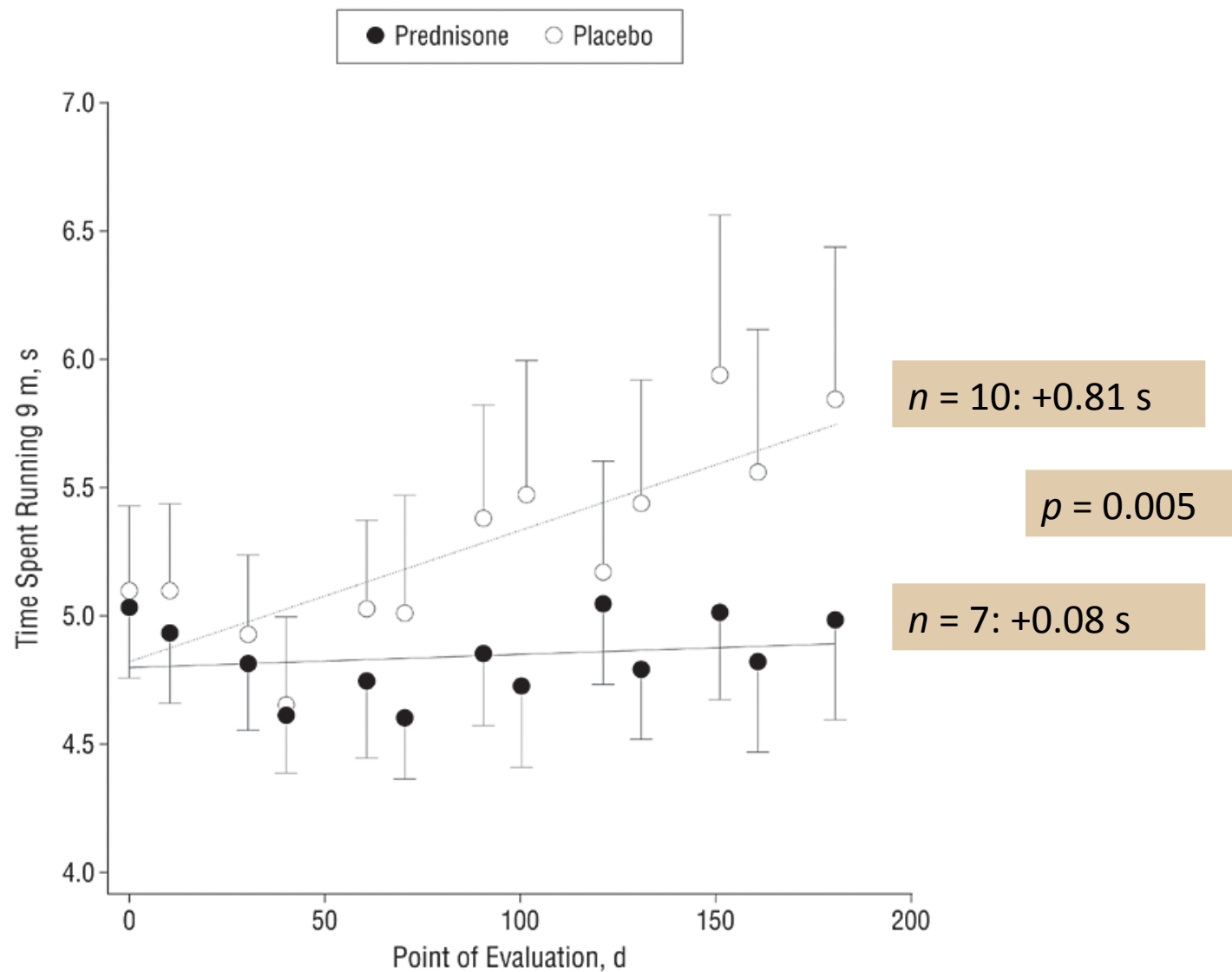


EDITORIAL

PREDNISONE IN DUCHENNE DYSTROPHY

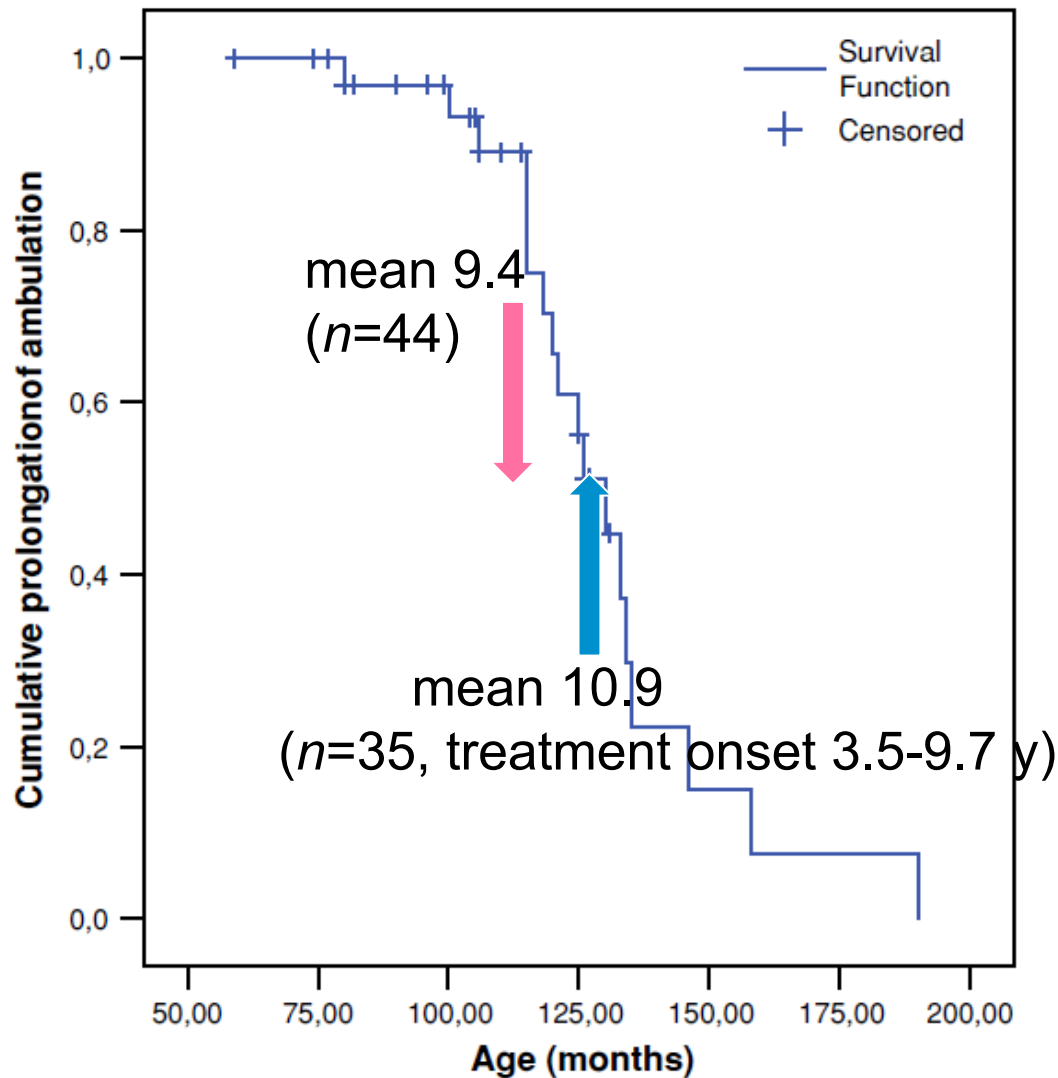
Ways will also have to be found to avoid the side-effects of prolonged steroid therapy, which may still outweigh the benefits. In view of the apparently rapid response in muscle strength within a matter of 10 days on a relatively low dosage regime, one possible approach would be a low dosage pulsed therapy, with short repeated periods of low dosage daily steroids, with intervals of no treatment in between. The periods of treatment would have to be short enough to avoid adrenal suppression and associated difficulty in withdrawing the drug.

History of 10 days intermittent dosing



At a clinical level, some individual patients showed definite functional improvement, whereas others did not. We also observed that there was a difference towards the end of the period when patients were off steroids and in a number of patients the effect of the medication seemed to fade towards the last 10 days of the month. This observation prompted a revised schedule of an intermittent regime of prednisolone of 10 days on and 10 days off.

Loss of ambulation in 35 patients on 10/10



Onset of treatment around 4-5 years

Dose up to 0.75 mg/kg/d in ambulant patients

Maximum dose varies between 30-40 mg

10 days on 10 days off as standard regime

- Shortening of interval in case of response fluctuations
- Occasionally 3 days on – 4 days off

Prednisone first choice

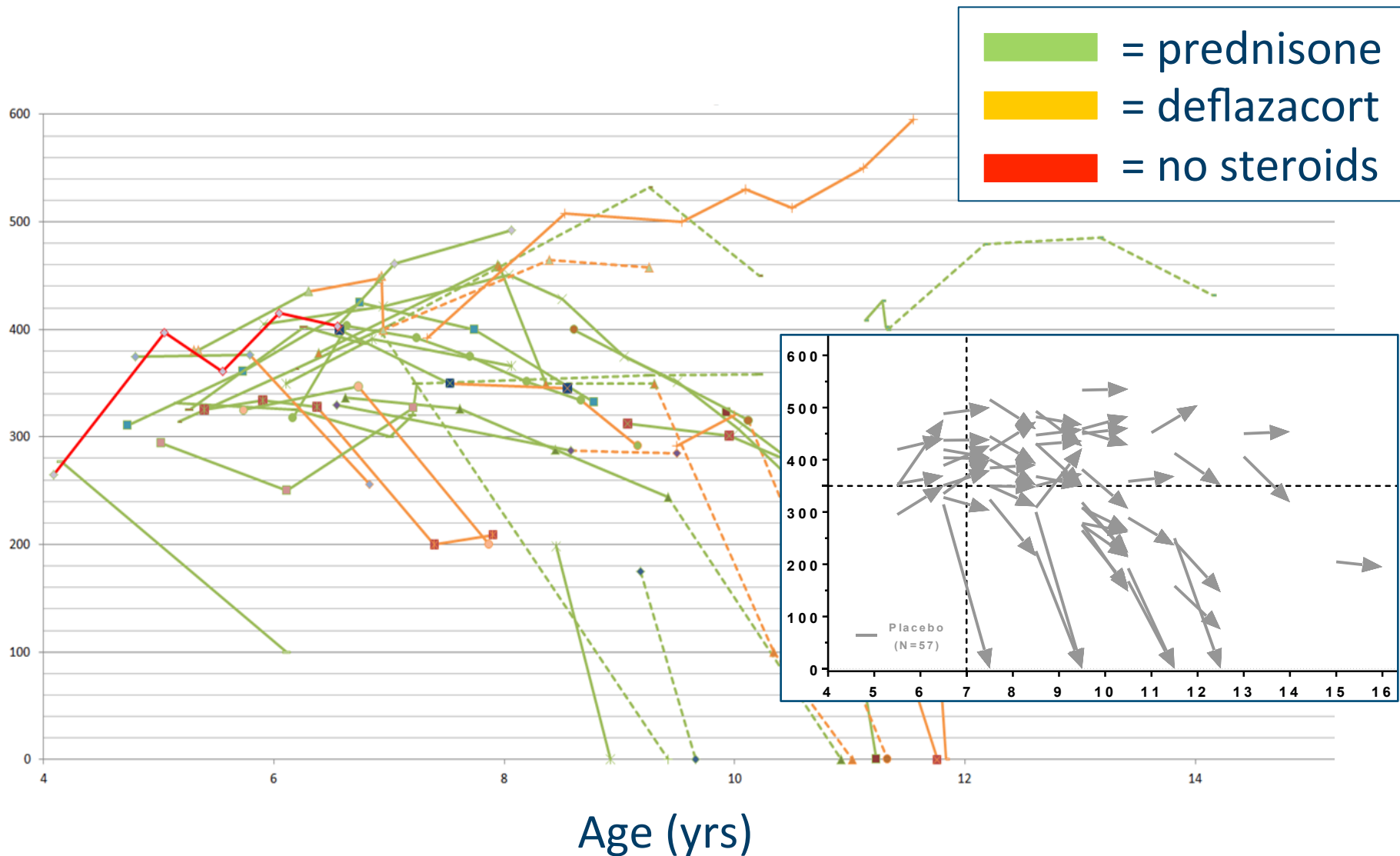
Deflazacort in selected cases

- Excessive weight gain or behavioral changes on prednisone
- Explicit request by parents

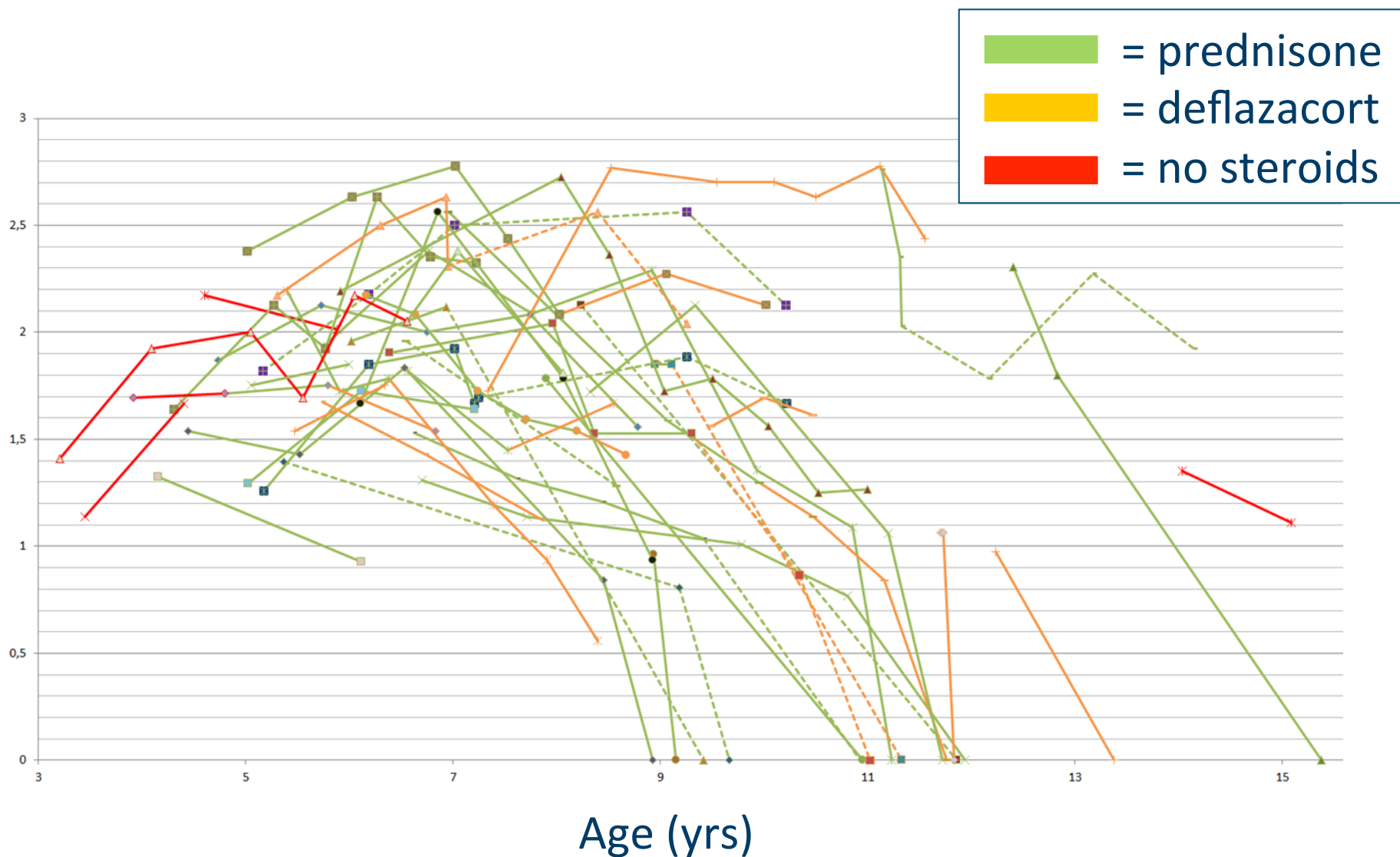
Continuation of intermittent treatment in non-ambulant phase

- Larger variation regarding the daily dose

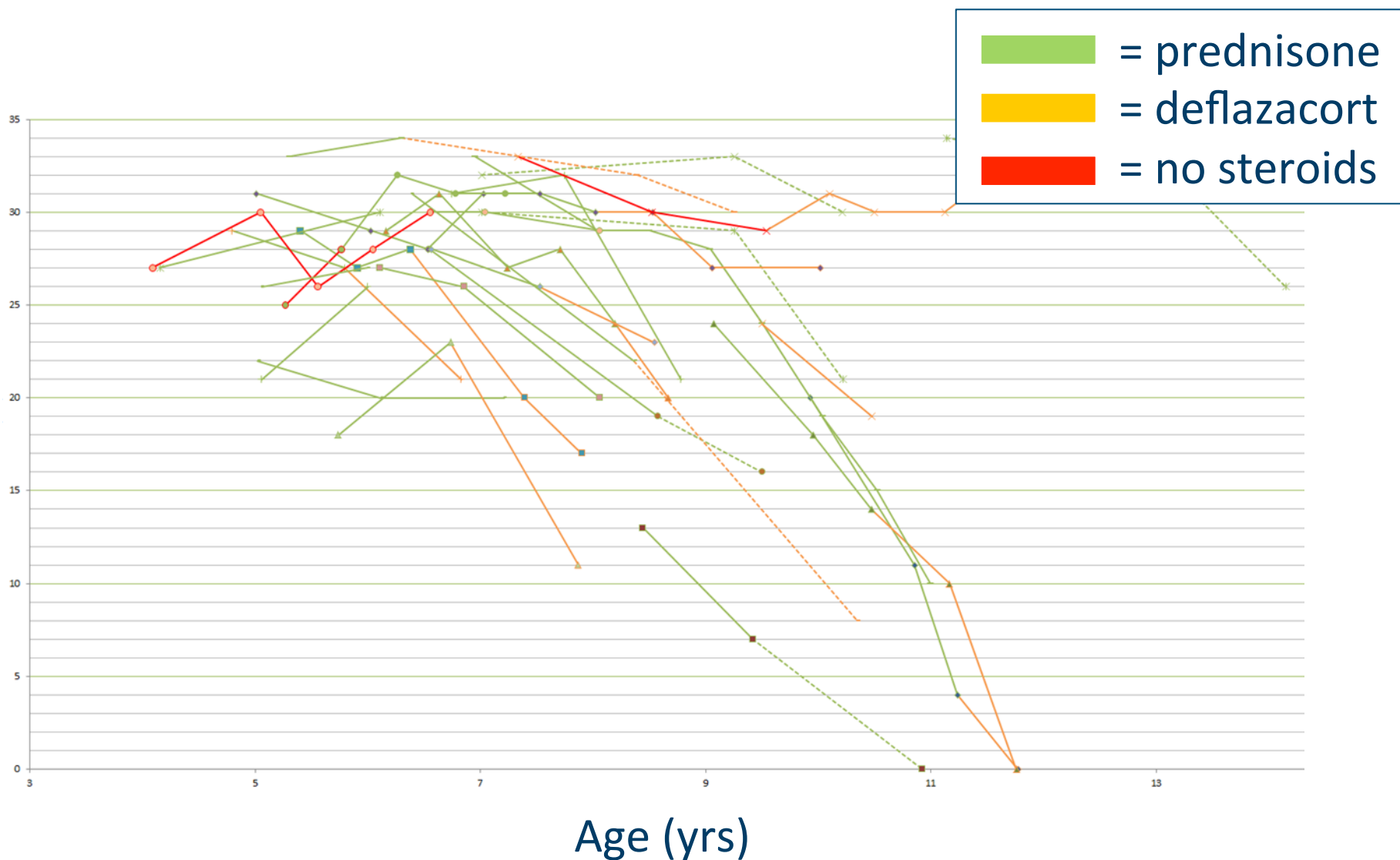
LUMC data on 10/10 – 6 MWD (m)



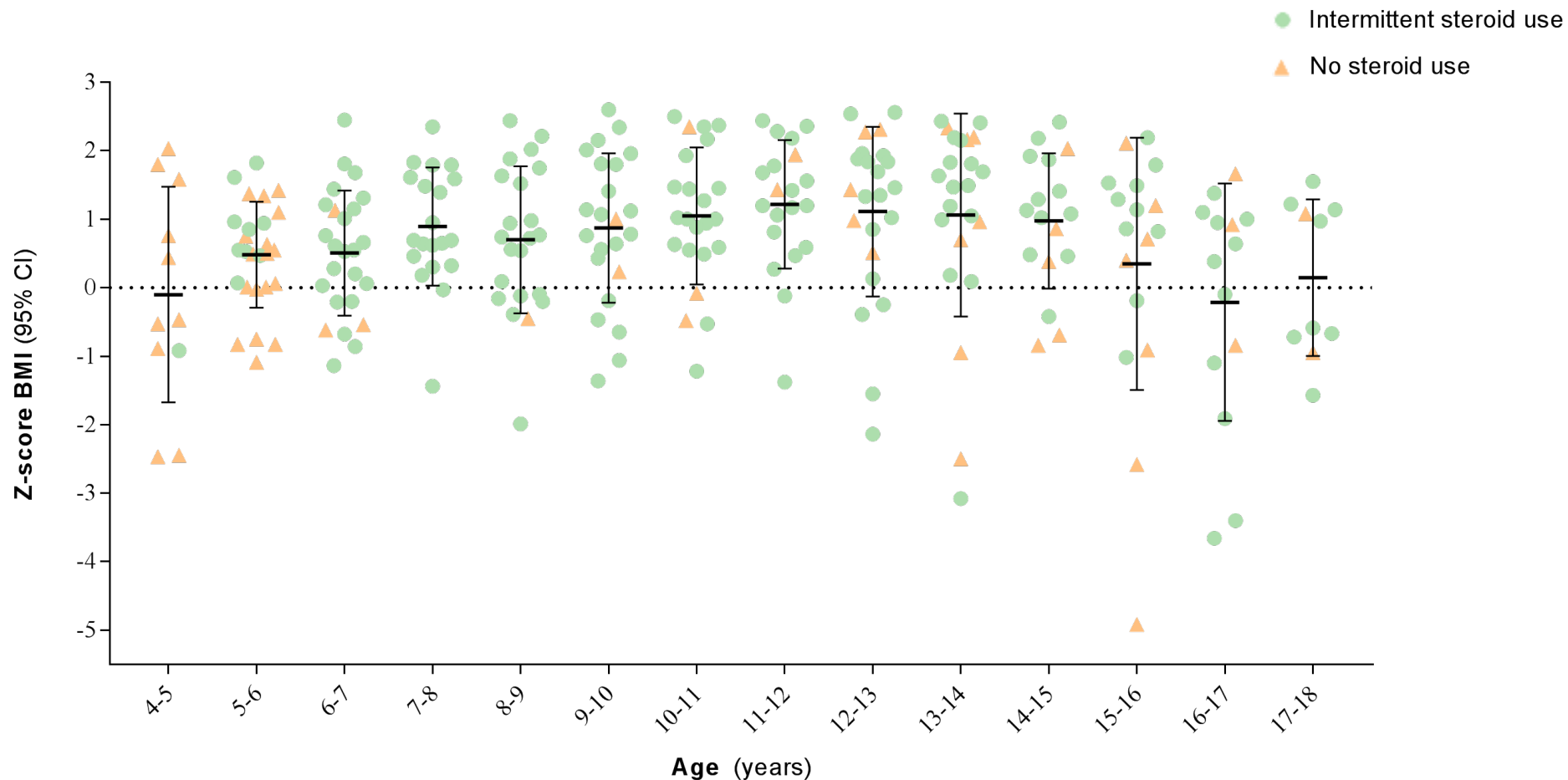
LUMC data on 10/10 – 10 meters run (m/s)



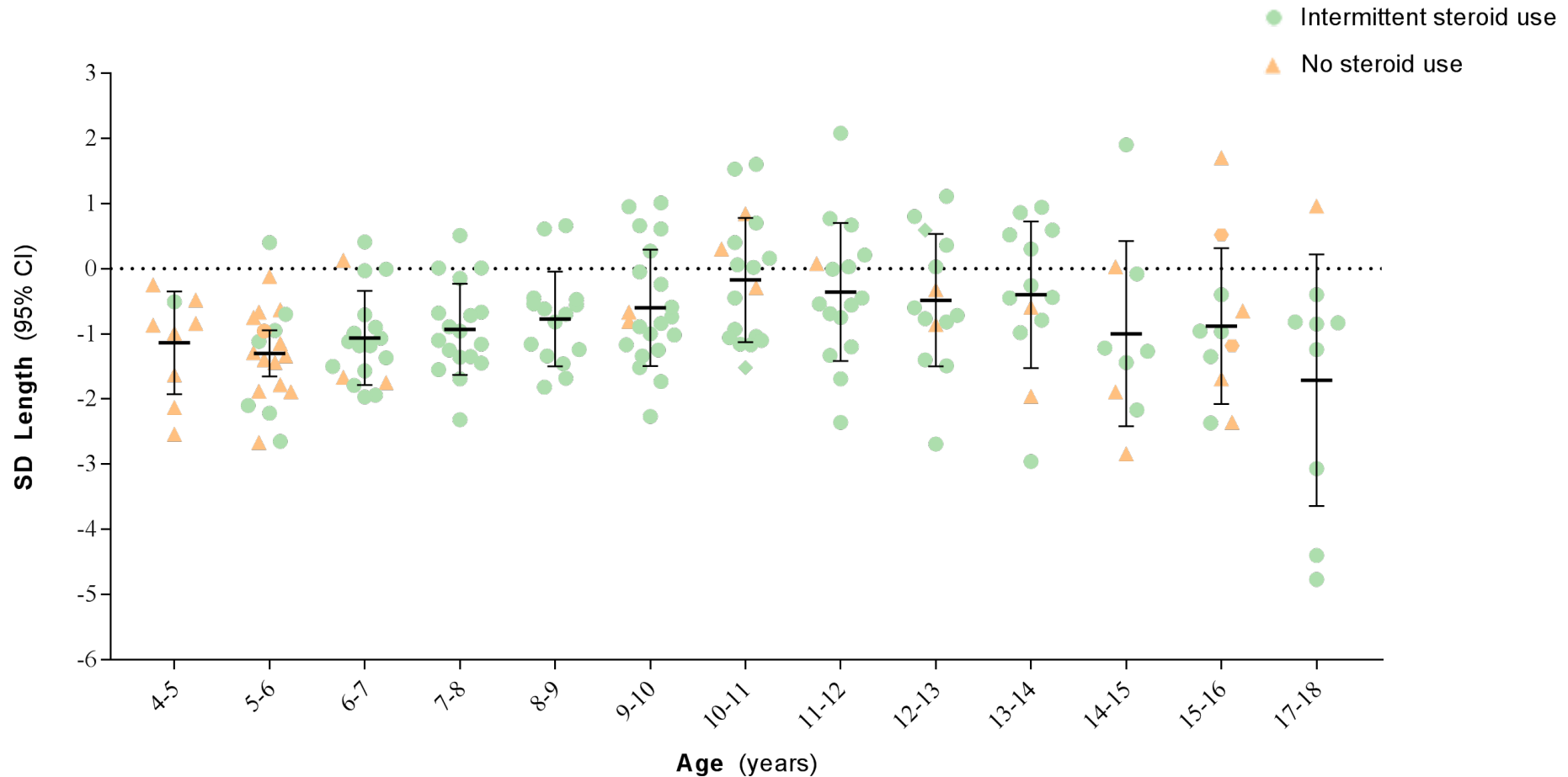
LUMC data on 10-10 - NSAA



LUMC data – body mass index



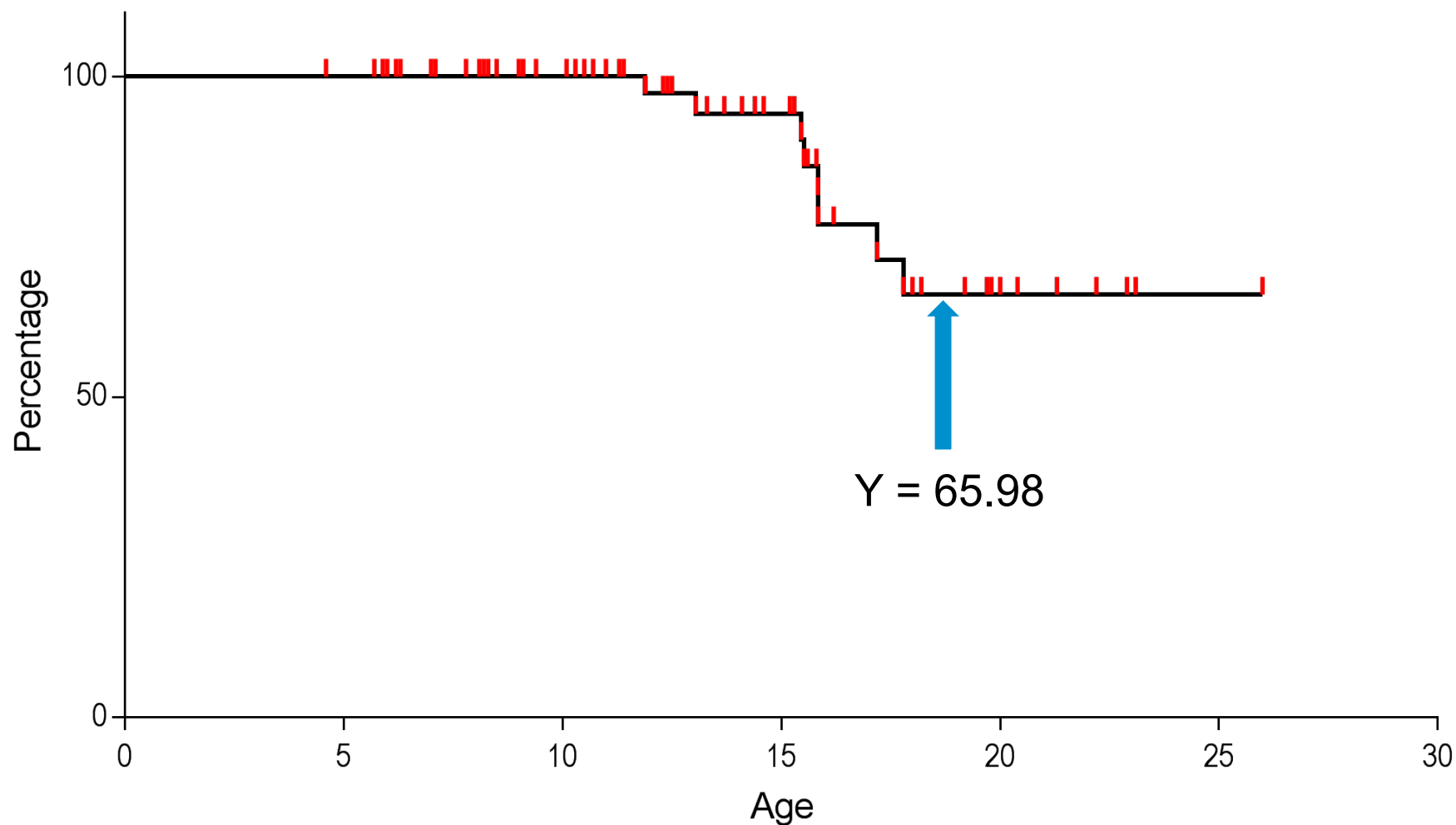
LUMC data – height *



* Only data from electronic hospital records could be used to compare normative data

LUMC data – scoliosis surgery

N = 64, born < May 2012, > 1 year of steroid treatment

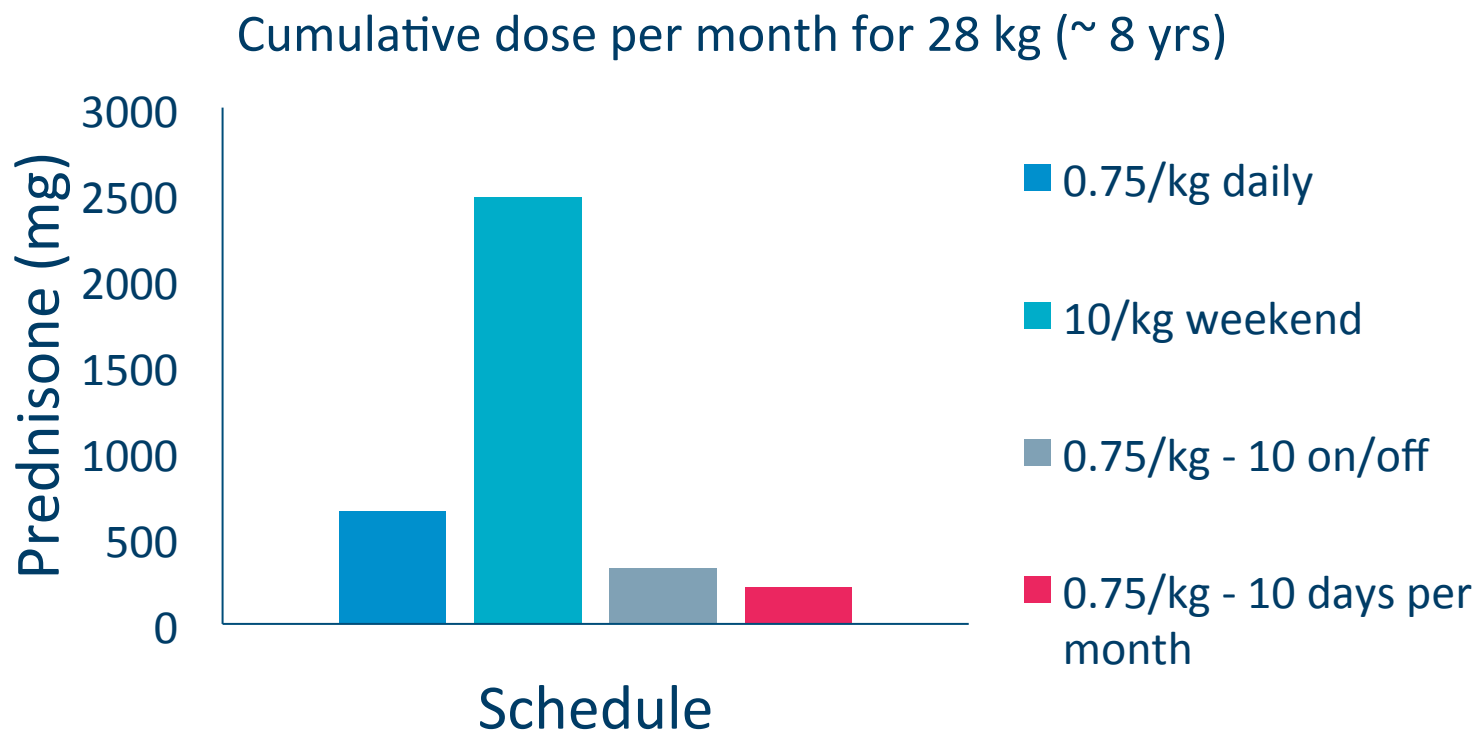


Considerations on SoC 2018 (not only facts...)

Daily steroids recommended – prednisone or deflazacort (Fig 3)

Weekend only dosing mentioned as alternative

When to start not prescribed



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When to start not prescribed

Is the 10/10 schedule still an alternative approach?

- Shorter ambulant phase
- More scoliosis surgery
- Obesity and behavioral changes
- ...

- Preserved height
- Little changes on lateral VFA
- No clinical adrenal insufficiency
- ...

Patient and parent perspective on this balance ?

Decision to be made prior to knowing individual responses and preferences

Dutch Dystrophinopathy Database & Parelsnoer



- Nationwide inclusion
- All ages
- Standardised assessments by trained PTs
- DNA
- Longitudinal sampling of blood and urine for biomarkers



Discussion...

