

Glomerular filtration rate following GH treatment

in SGA born young adults

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GFR decreased only during 6 months after GH cessation, but thereafter GFR remained stable and within the normal range. GFR at 21 years is similar in GH-treated and untreated young adults born SGA and AGA.

Background

Methods

- **GH treatment** increases glomerular • filtration rate (GFR), as serum IGF-I stimulates the renin-angiotensin system.
- Infants born with a low birth weight • have a smaller number of nephrons, which causes a lower GFR, a higher blood pressure and a higher albuminto-creatinine ratio in early adulthood.

- 1. GFR was calculated with the CKD-EPI formula in 261 GH-treated young adults born SGA (SGA-GH), at GH-stop and at 6 months, 2 and 5 yrs thereafter.
- 2. At 5 yrs after stop, a mean age of 20.9 yrs, GFR in 261 SGA-GH young adults was compared with:
- SGA born young adults with age-matched controls with:
 - Persistent short stature (SGA-S, n=56) •
 - Spontaneous catch-up growth (SGA-CU, n=118)
- AGA born young adults with normal adult height. (AGA, n=135)

Objective

Results

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- 1. To investigate longitudinal changes in GFR following growth hormone (GH) stop in young adults born small
- **1. GFR** decreased significantly during the first 6 months after cessation of GH treatment, while remaining well within the normal range (124.6 vs. 120.2mL/min/1.73m2, p<0.001), between 2- and 5 yrs.

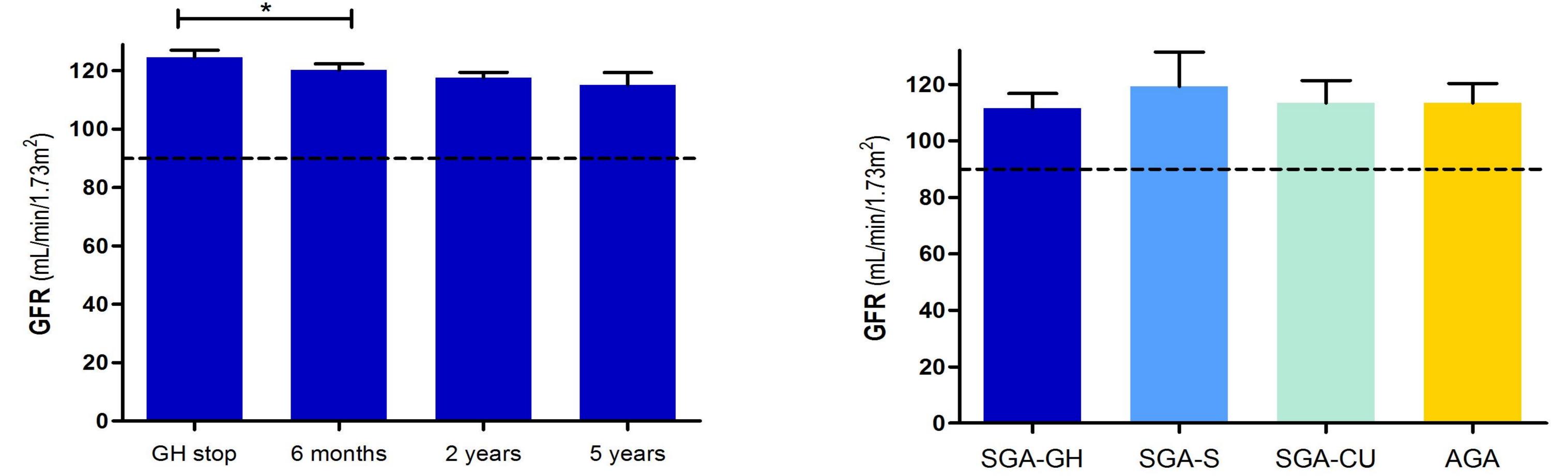
for gestational age (SGA).

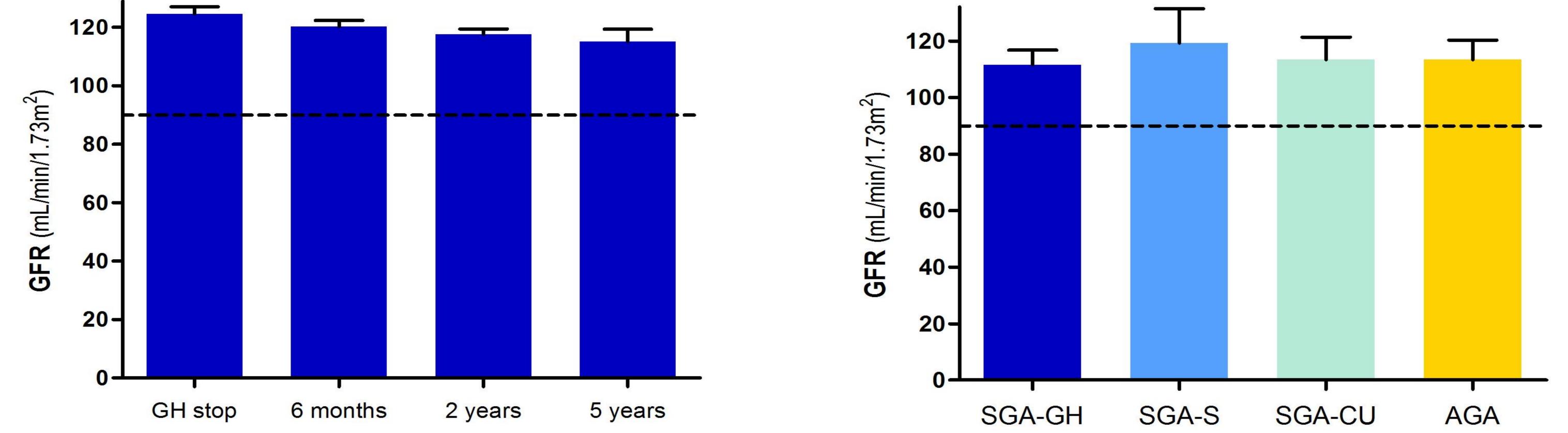
2. To compare GFR at 5 years after cessation with untreated young adults born SGA or AGA, at the age of 21 yrs.

2. At 5 yrs after GH-stop, SGA-GH adults had a similar GFR as the untreated SGA and AGA adults.

GFR in GH-treated young adults following GH-cessation

GFR at 21 years of age compared between groups





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