

Subcutaneous growth hormone (GH) injection: GH pharmacokinetics in GH treated children



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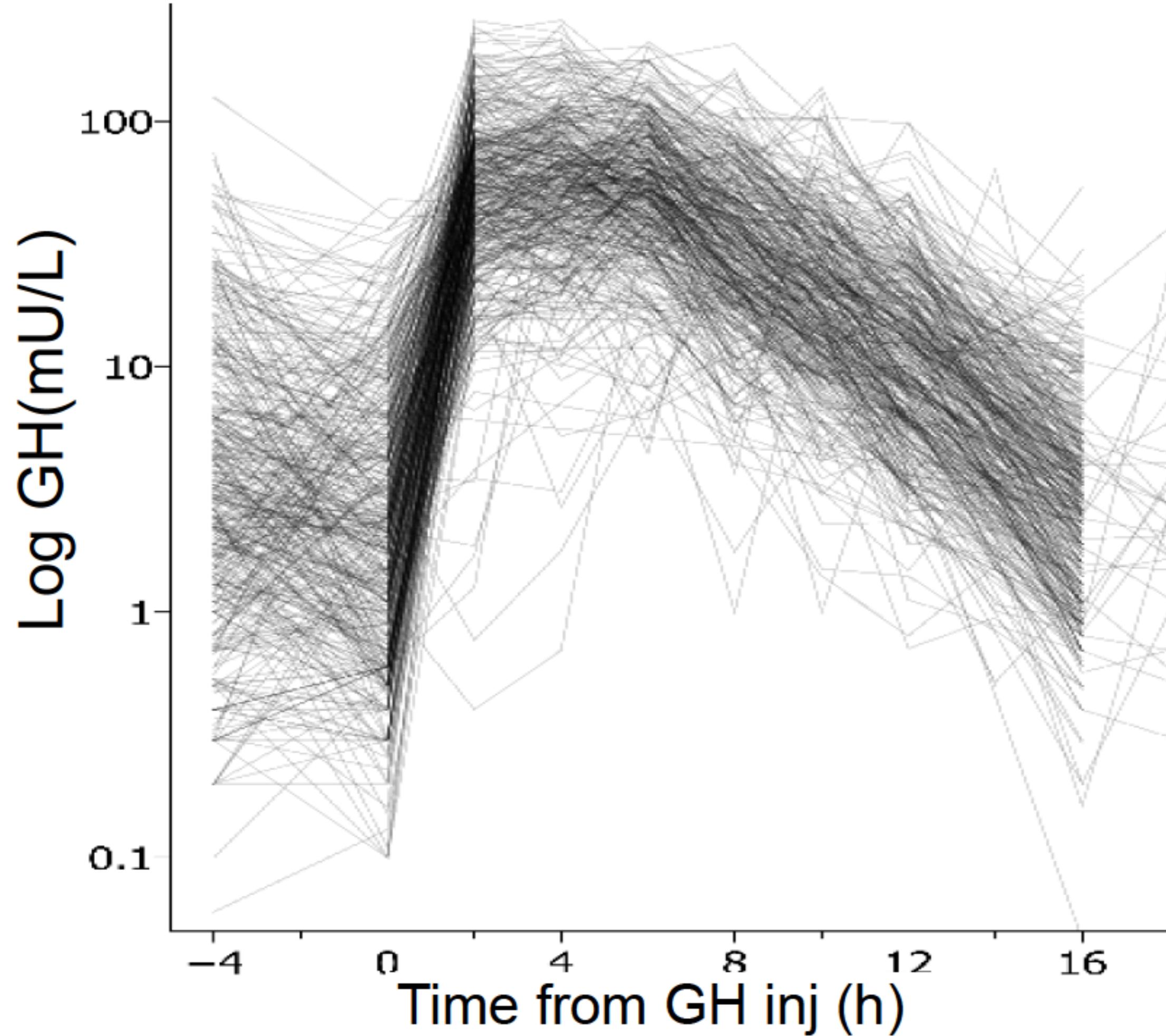
Aim: to measure the bioavailable immunoreactive GH serum concentration after sc injection in relation to injected GH dose in GH treated children.

Background: The current administration of GH is daily subcutaneous (sc) injection at bedtime. The variation in uptake of injected GH both within and between patients is hardly known.

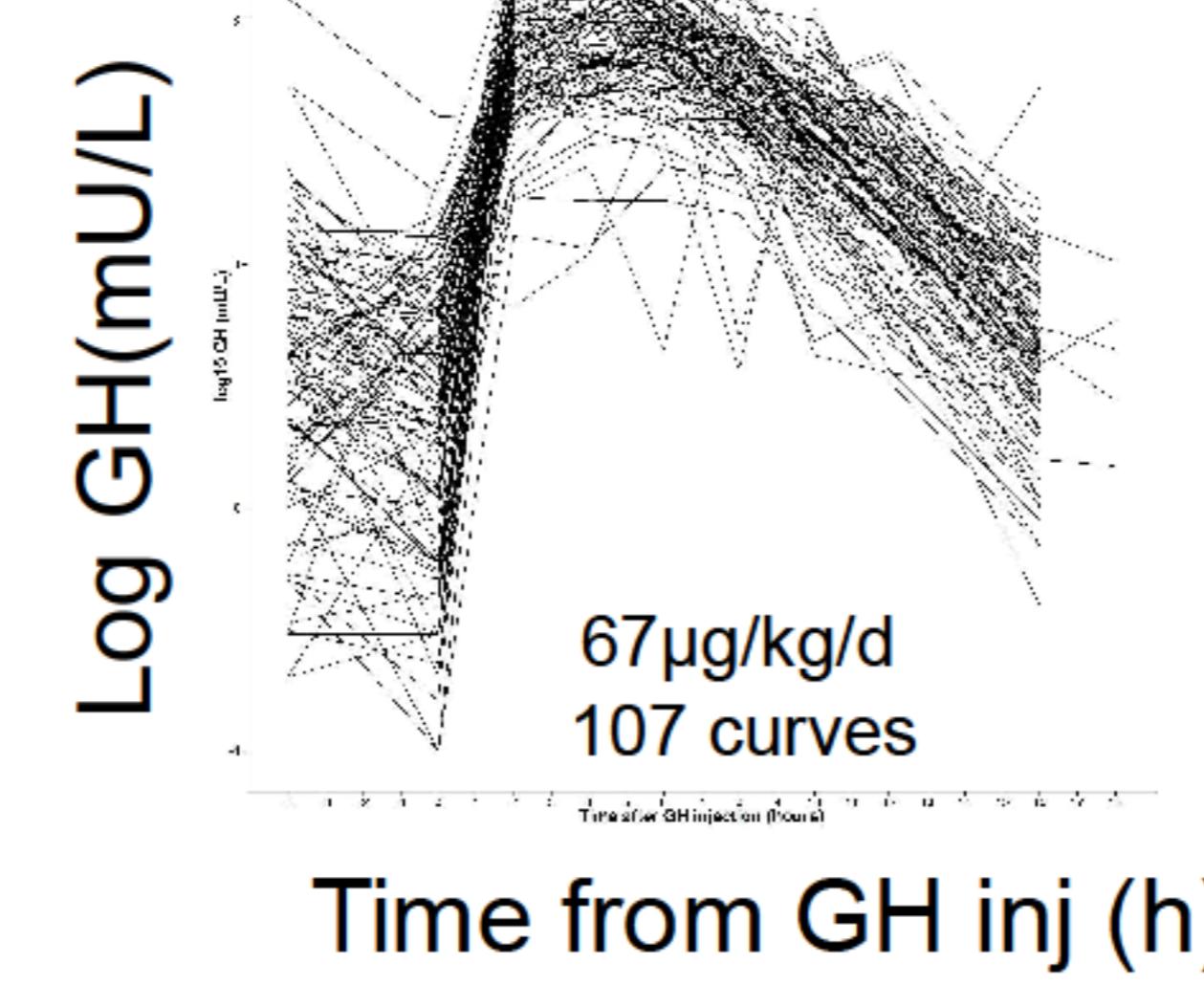
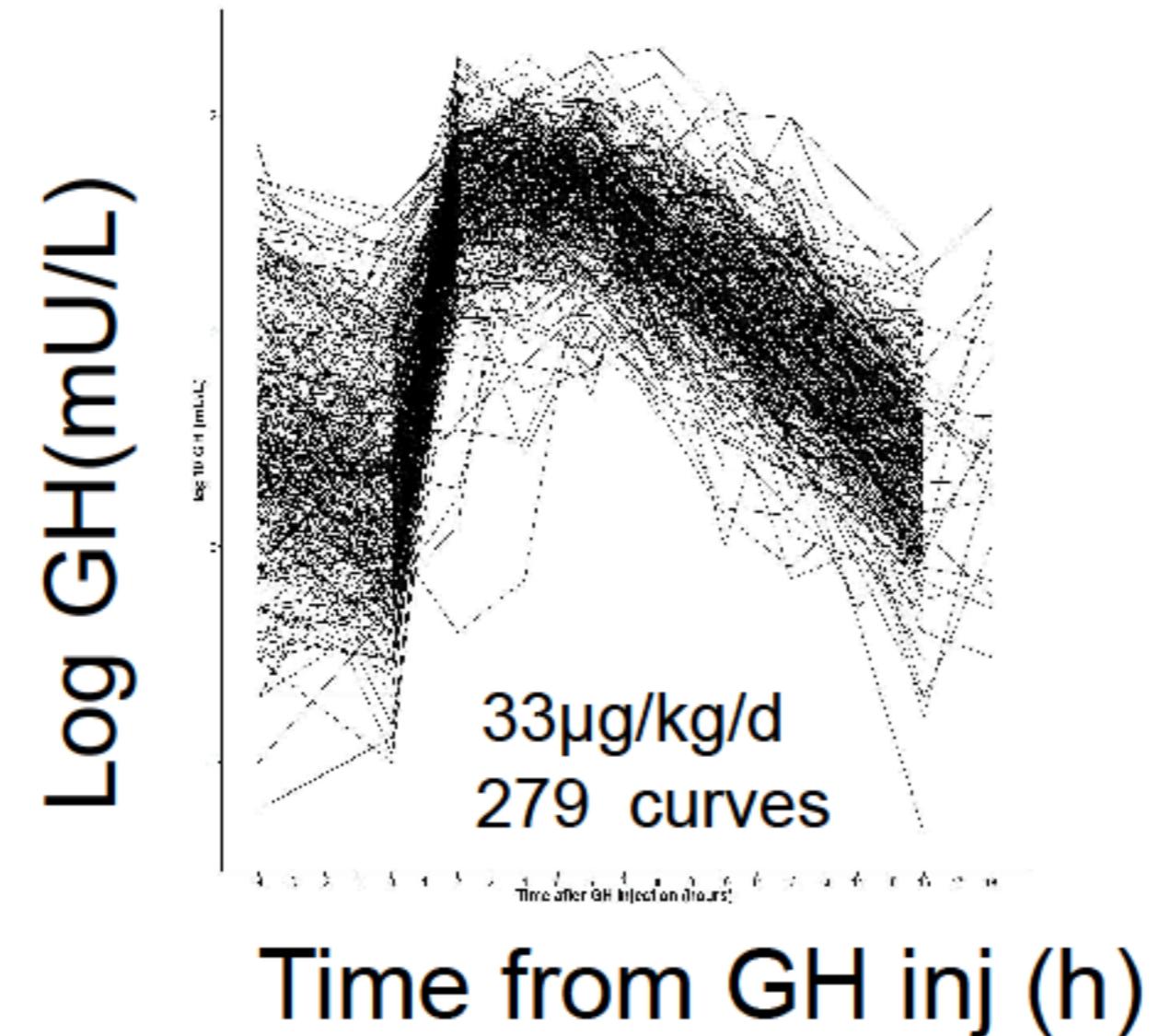
Results

Interindividual variation

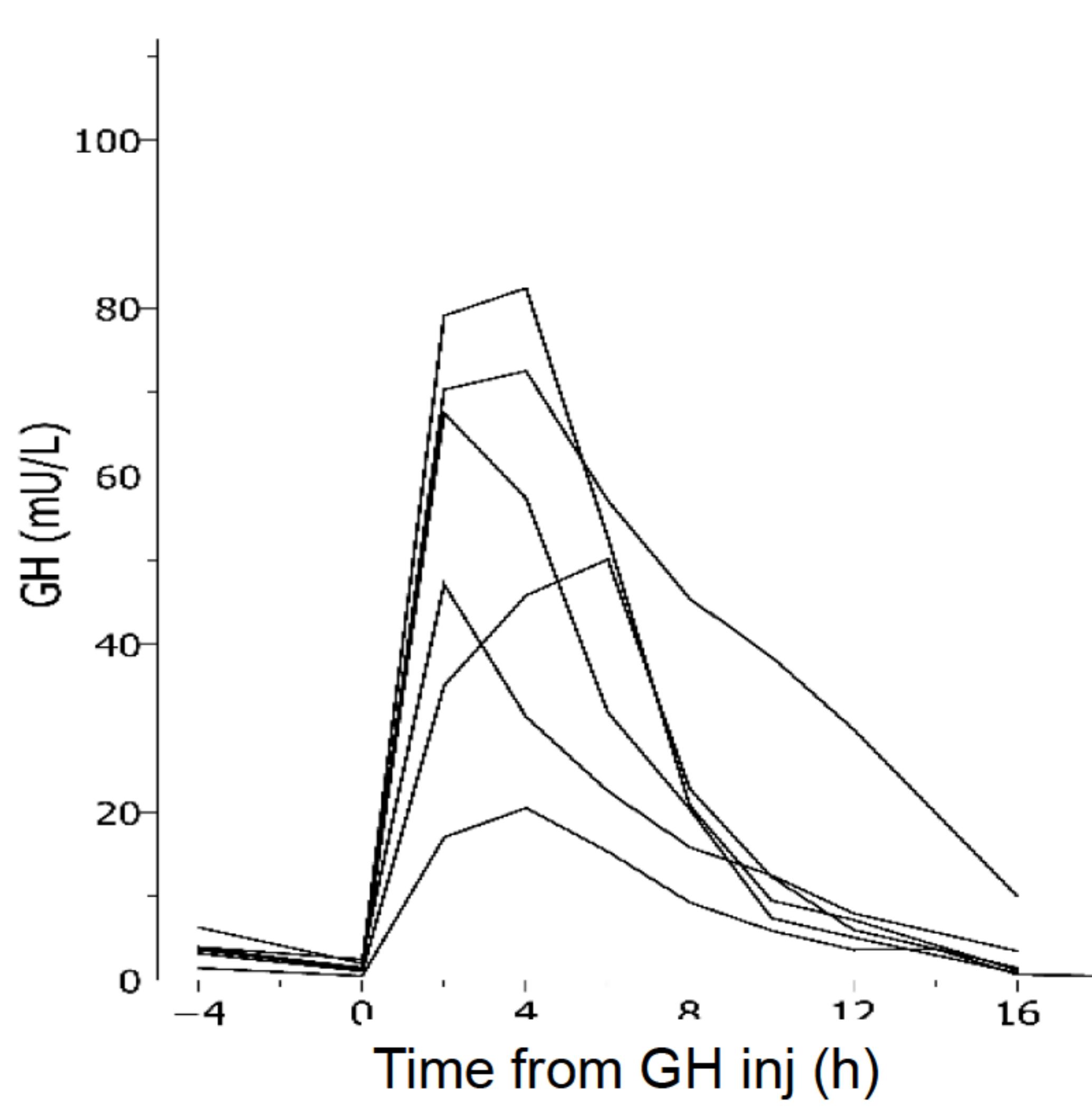
115 patients, 403 GH curves



Cmax 74mU/L, CV 36%; Tmax 4h, CV 35%; AUC16h 554mU/L, CV51%.

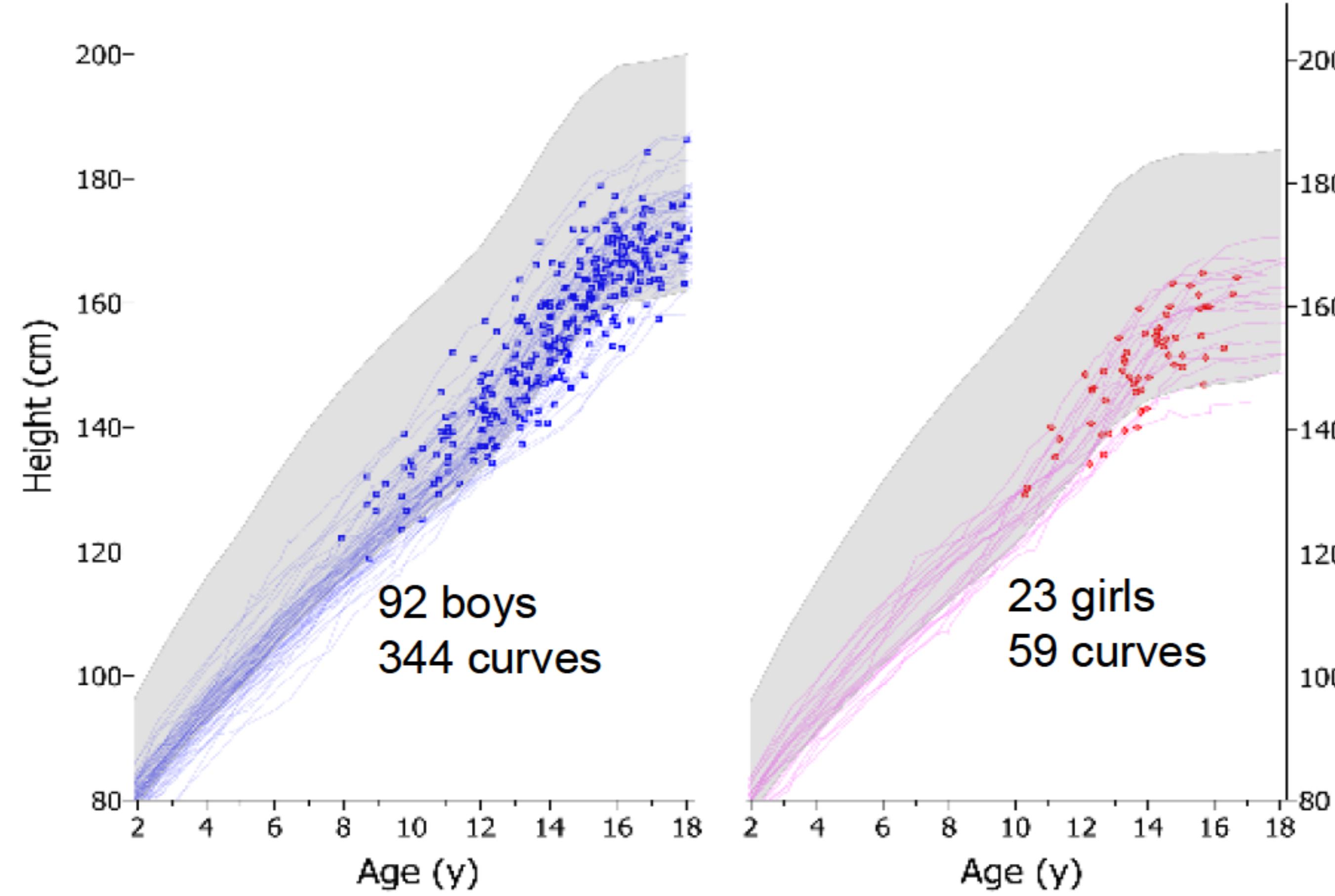


Intra-individual variation.



GH curves from one male, GHD patient.

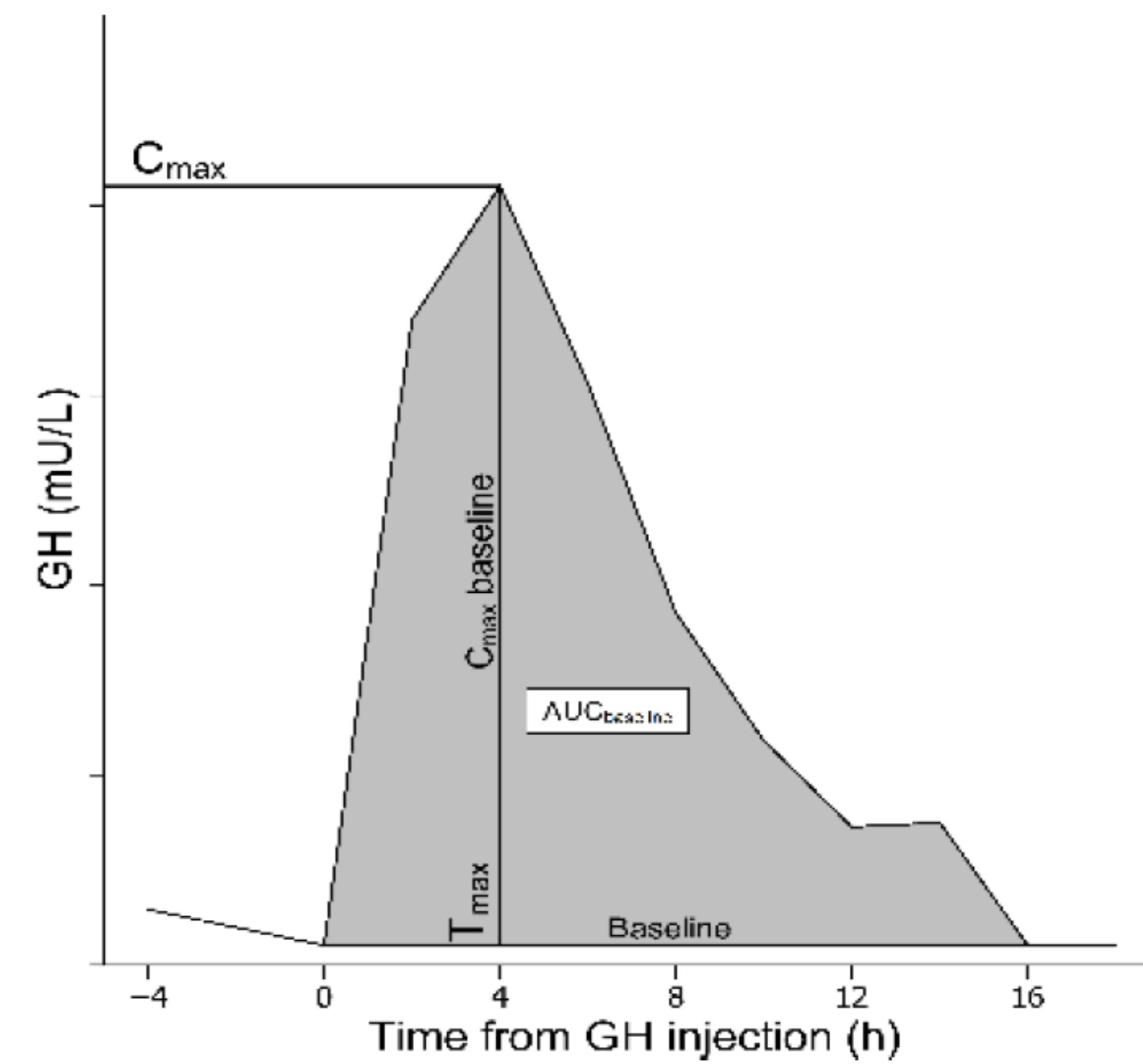
Material



Study population: 115 patients (92 boys, 23 girls), followed yearly 2-8 times 1992-99.

Study design: GH, Genotropin® pen 4/16, needle 12mm, dose 33 or 67 µg/kg/d sc injected at 18.00 by patient, 90 deep sc in thigh. GH serum-sampling every 2nd h until 16h after inj.

Methods



Pharmacokinetics: estimated by Tmax(h), Cmax(mU/L), AUC 0-16h above baseline (AUC16h) (mU/L).

GH-assay: analysed by Pharmacia Polyclonal assay, IRP 80-505.

Disclosure: EL, BA, SR, KAW has nothing to declare; BK has received lecture and consultancy fees from Pfizer.

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