



DiRECT: A new paradigm for pathophysiology and management of type 2 diabetes (*diabetes adipositus*)

DiRECT/Counterweight-Plus intervention



1. Total Diet Replacement ('12 weeks')

Nutritionally complete (vitamins & minerals)
830 kcal: 61%E carb, 13% fat, 26% protein



2. Stepped Food Reintroduction

Add a ~400kcal meal every 2-3 weeks
Step-counters: gradually increase PA



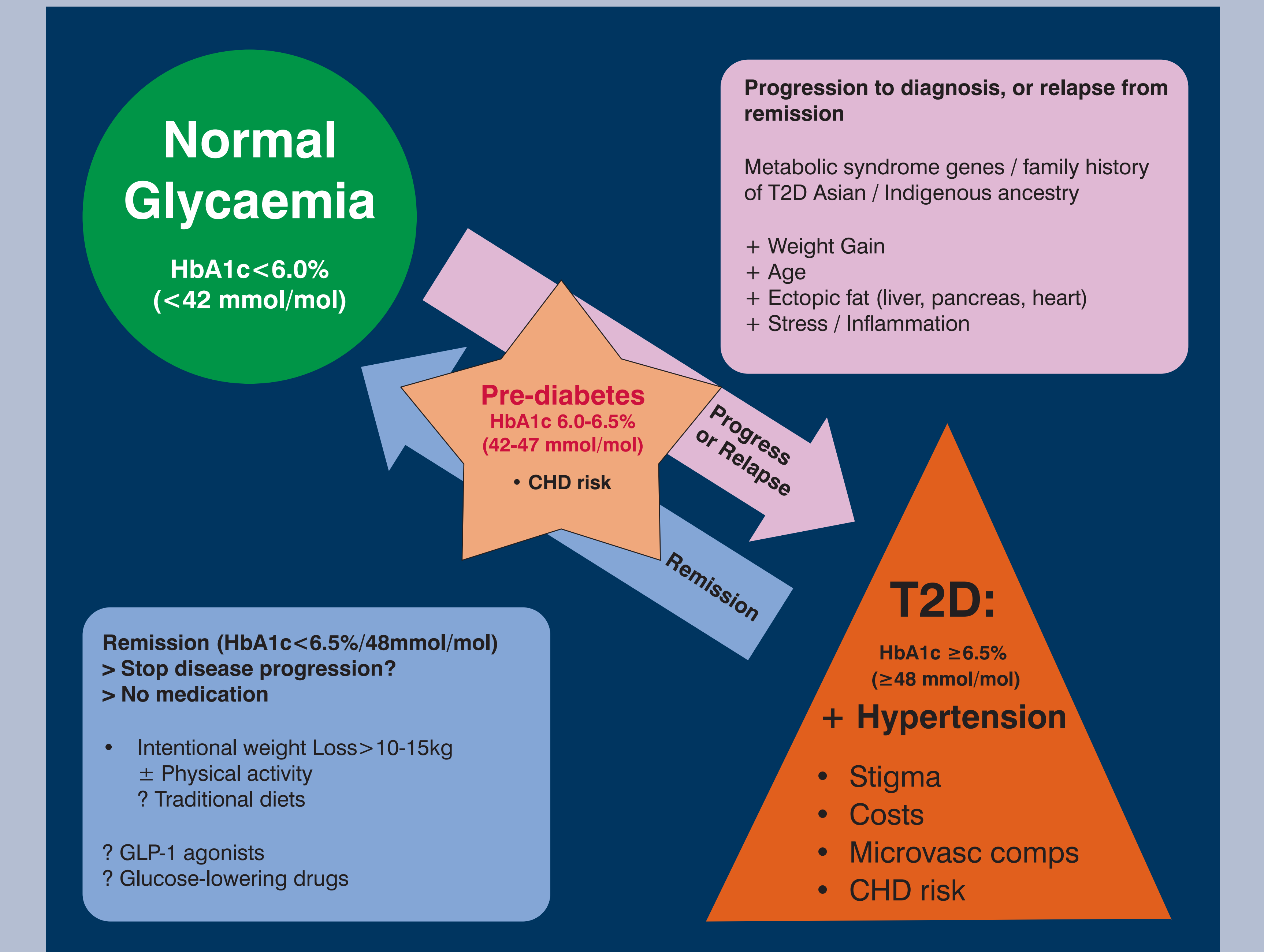
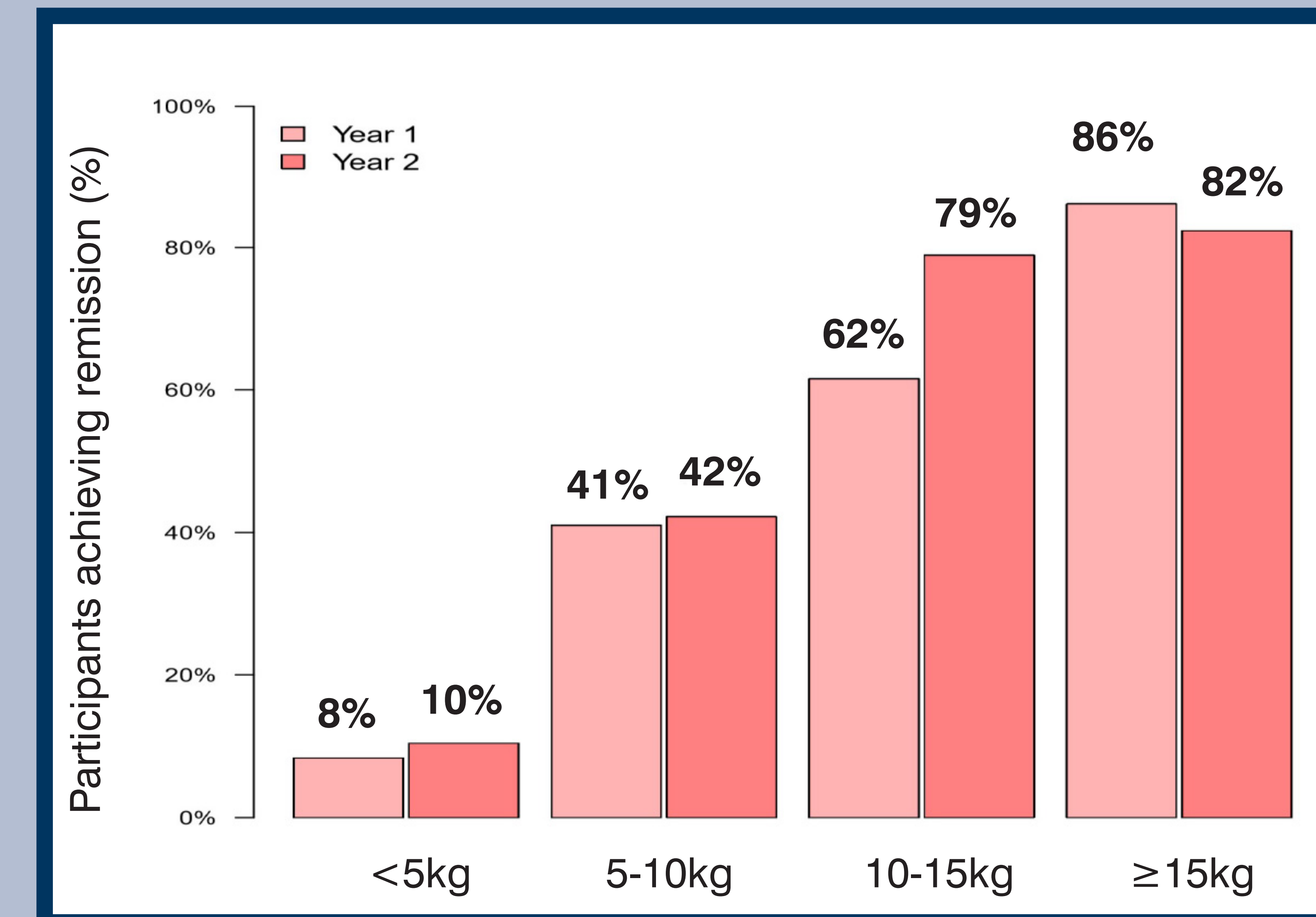
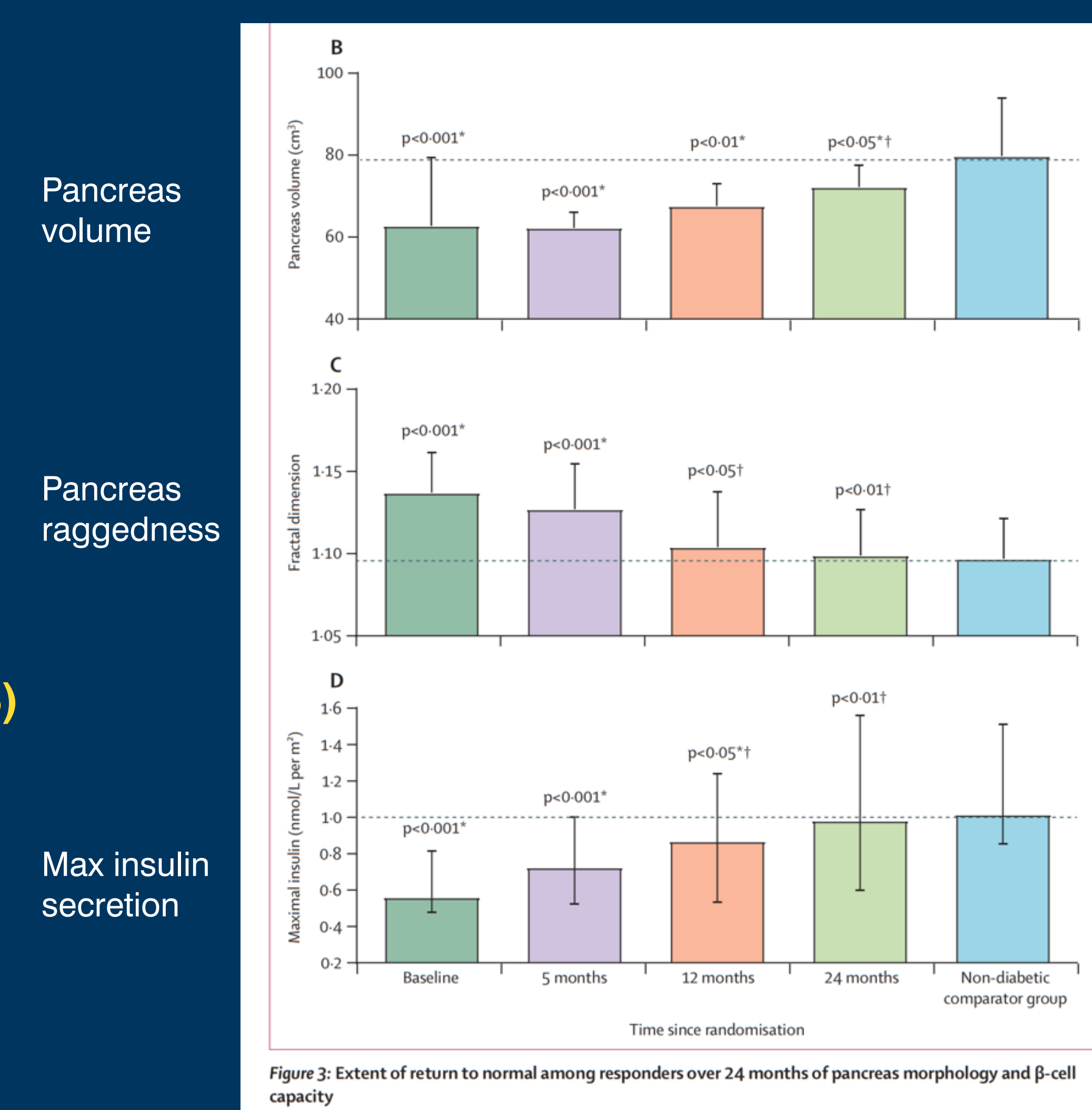
3. Weight Loss Maintenance

Food-based diet +/- meal replacements
50%E carbohydrate, 35% fat, 15% protein
Offer Relapse Management (regain >2kg)

Visits 2-4 weekly, at own primary care centres
Programme delivered by usual primary care staff

DiRECT: Loss of intr-organ fat with remissions at 24 months

Responders (n=20)
Non-responders (n=13)
Relapsers (n=13)



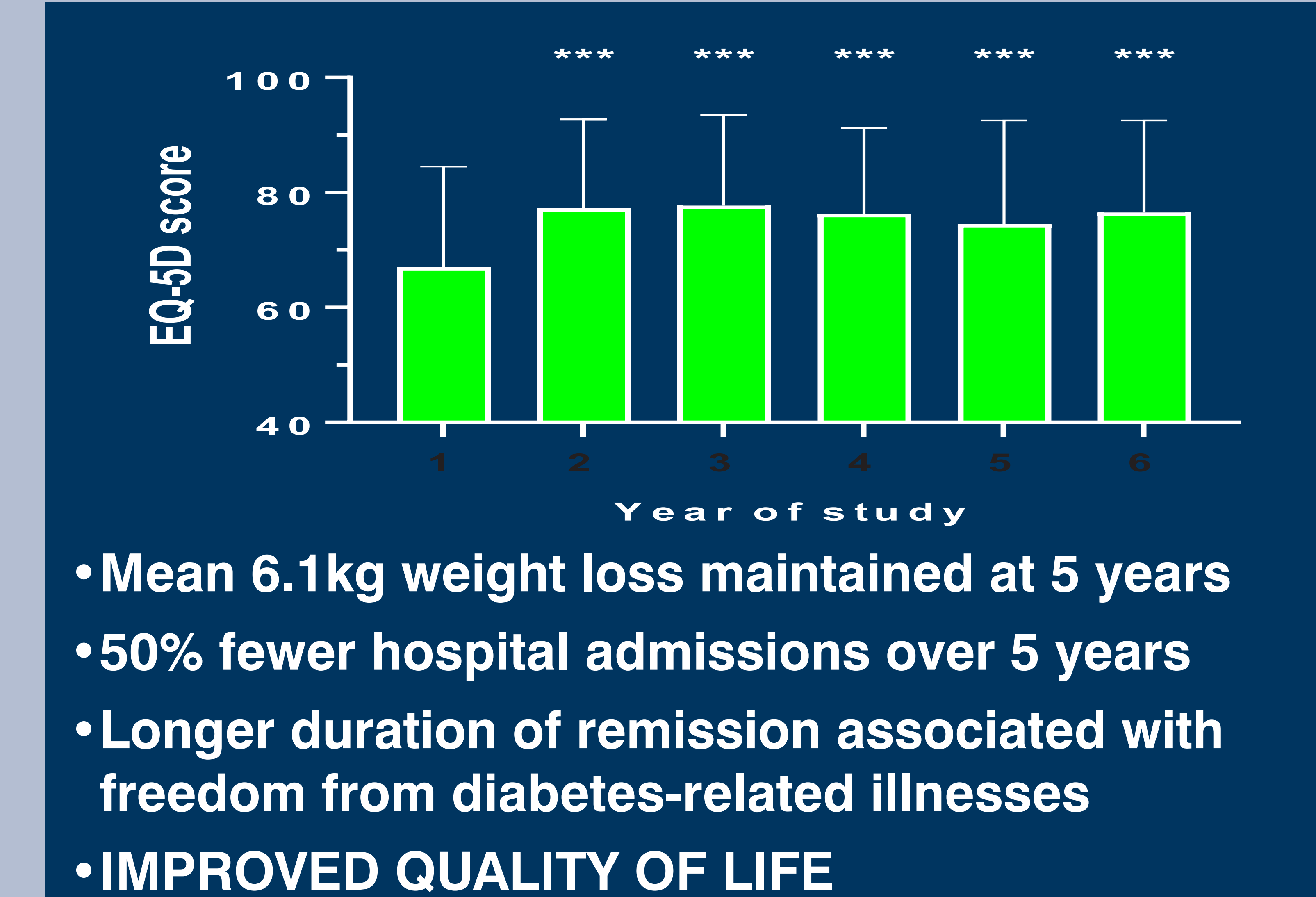
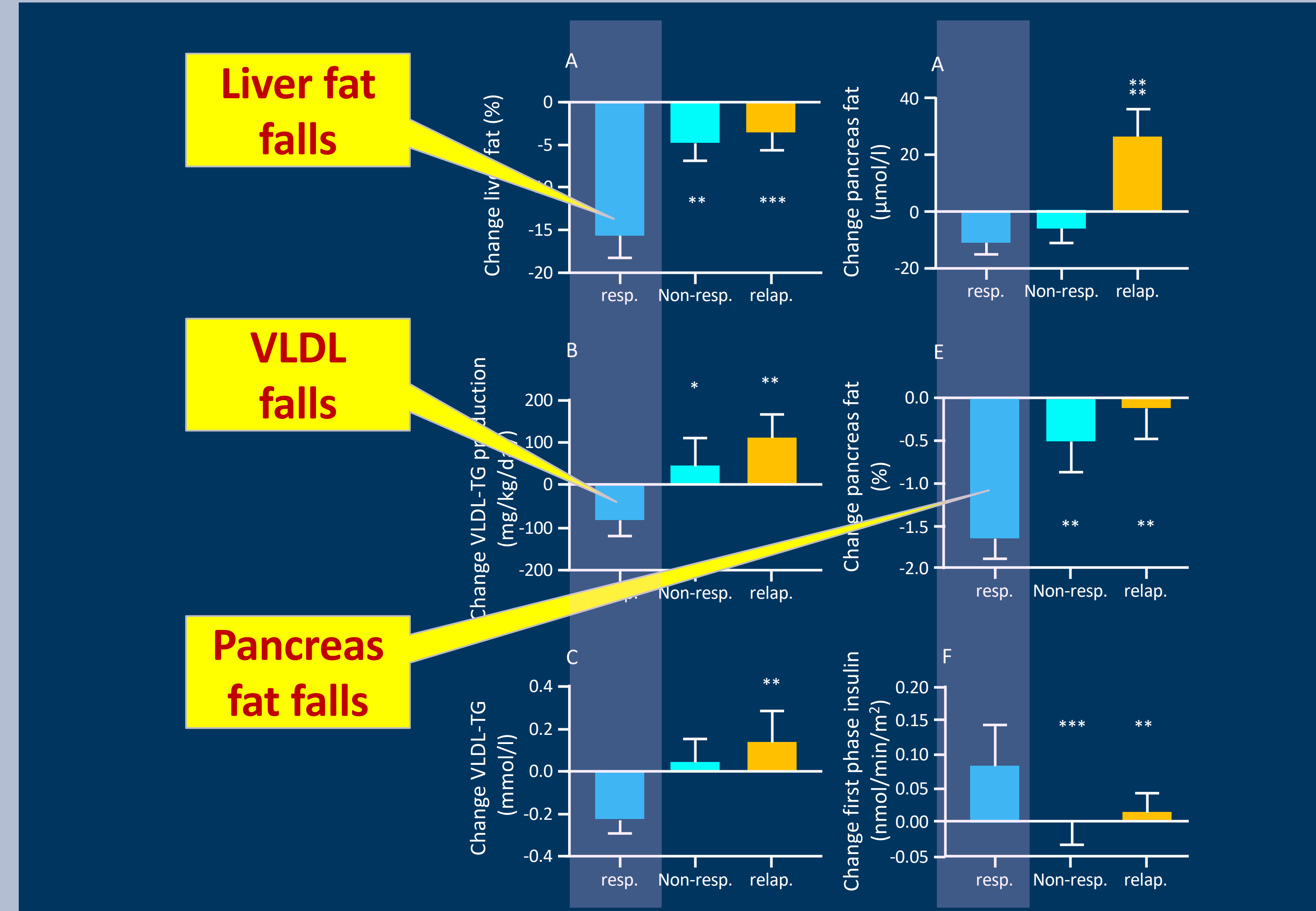
Diabetes UK
KNOW DIABETES. FIGHT DIABETES.

Mike Lean, University of Glasgow

Roy Taylor, Newcastle University

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Rank Prize for Nutrition, 2024
Professor Mike Lean (Glasgow and Professor Roy Taylor (Newcastle)



- Diabetes Remission is now a priority Management Target
- Diabetes UK. EASD Guidelines (2023)
- NHS England: 20,000 patients receiving T2D Remission programmes
- NHS Scotland: T2D Remission programmes in all Health Boards
- 'DiRECT Principles' intervention adopted for Programmes worldwide;
- Collaborative research in Qatar, Australia, New Zealand, Malaysia, Singapore, Nepal

www.directclinicaltrial.org.uk