

**Glycemic Status:
A Description of Pregnant Cree
Women Living in
James Bay, Québec**

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Gestational Diabetes Mellitus

“Carbohydrate intolerance resulting in hyperglycemia of variable severity with onset or first recognition during pregnancy”

Meltzer. Diabetes 1991; 40 (suppl):197

Mother

- PIH, preeclampsia
- Type 2 diabetes

Infant

- Macrosomia
- Hypoglycemia at birth
- Type 2 diabetes

Background Information

The sociocultural and biological determinants of overweight in Cree children

Purpose:

- To examine the growth of Cree children from 0 to 5 yrs of age.
- To identify factors that may affect child growth (eg. anemia, type of feeding, maternal glucose tolerance)

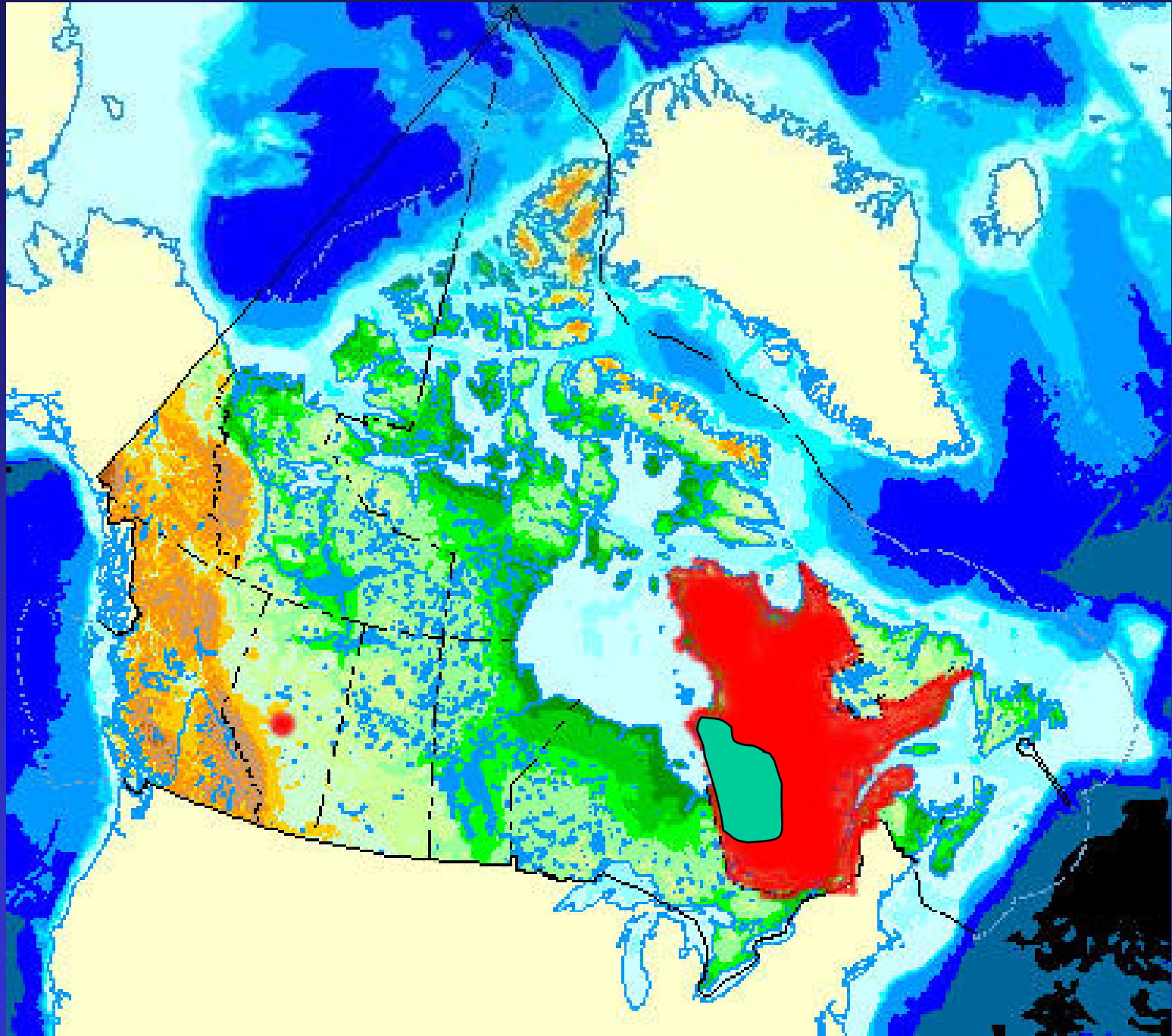
Objective

To describe the physical characteristics of women with normoglycemia, IGT, and GDM during pregnancy.



Methods

- **Medical chart review (1709 women)**
 - January 1994 to December 2000
 - Obstetric forms, laboratory reports, medical notes
- **9 communities in James Bay Region**



Data Collected

Early
Pregnancy

During
pregnancy

Infant
Characteristics

Weight

50 g OCGT

Birth weight

Height

75 or 100 gm OCGT

Age

Fasting glucose

Diagnostic Criteria

All women are given
fasting plasma sample

All women have 50g OGCT

Normal glycemia:
<7.8mmol/l

Further testing:
7.8-10.2mmol/l

GDM:
≥10.3mmol/l

OGTT

GDM Diagnostic Criteria: OGTT

NDDG ^a – 100 _{gm}	Time	CPG ^b – 75 _{gm}
5.8	fasting (mmol/l)	5.3
10.6	1h (mmol/l)	10.6
9.2	2h (mmol/l)	8.9
8.1	3h (mmol/l)	

^a National Diabetes Data Group. Diabetes 1979; 28: 1039.

^b Clinical Practice Guidelines. CMAJ 1998; 159: S1.

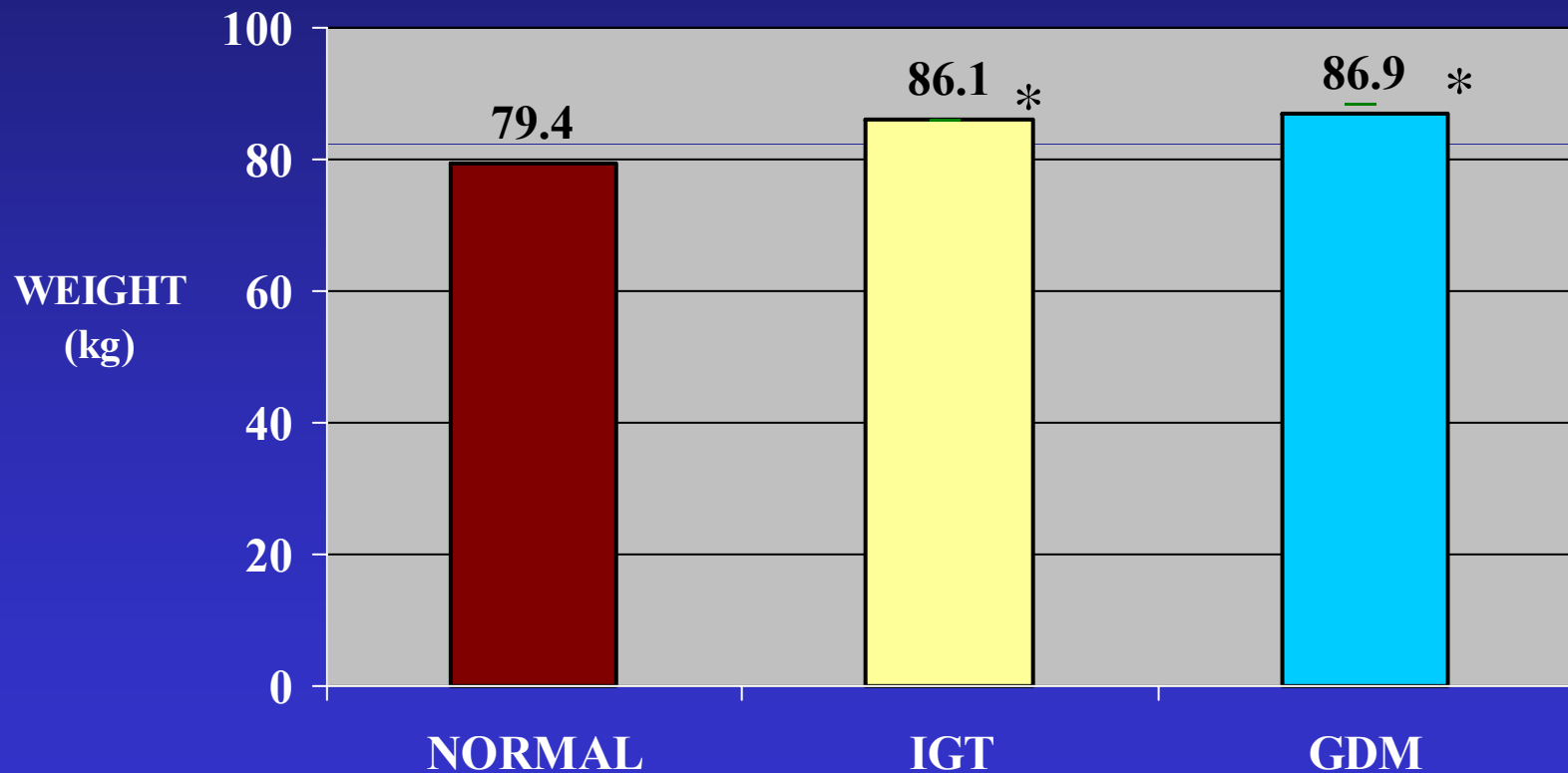
Prevalence

Glycemic Status	Number	% of Sample
Normal	1296	75.8
Impaired Glucose Tolerance (IGT)	142	8.3
Gestational Diabetes Mellitus (GDM)	271	15.8
Total	1709	100

Prevalence

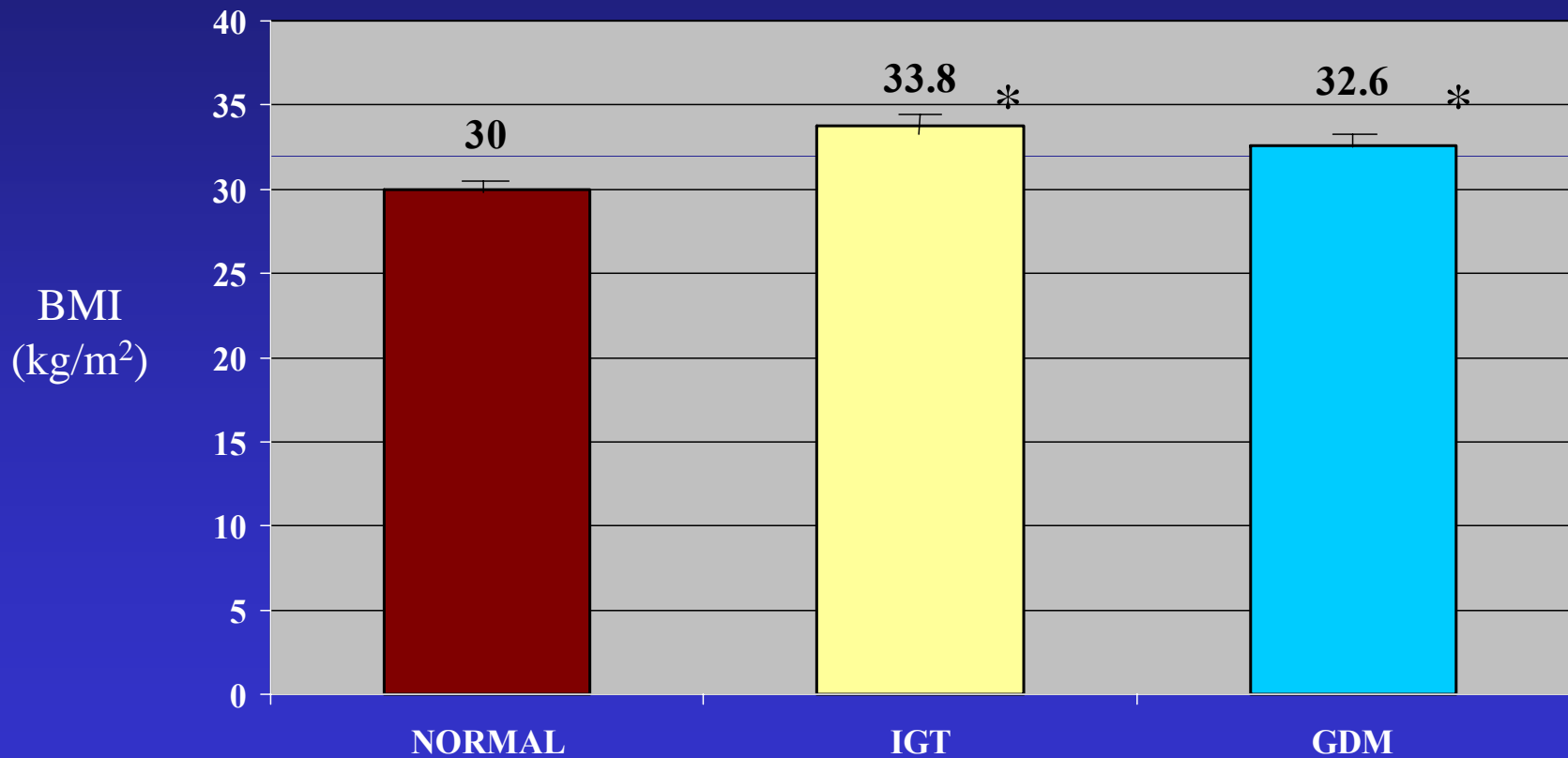
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Body Weight Early in Pregnancy



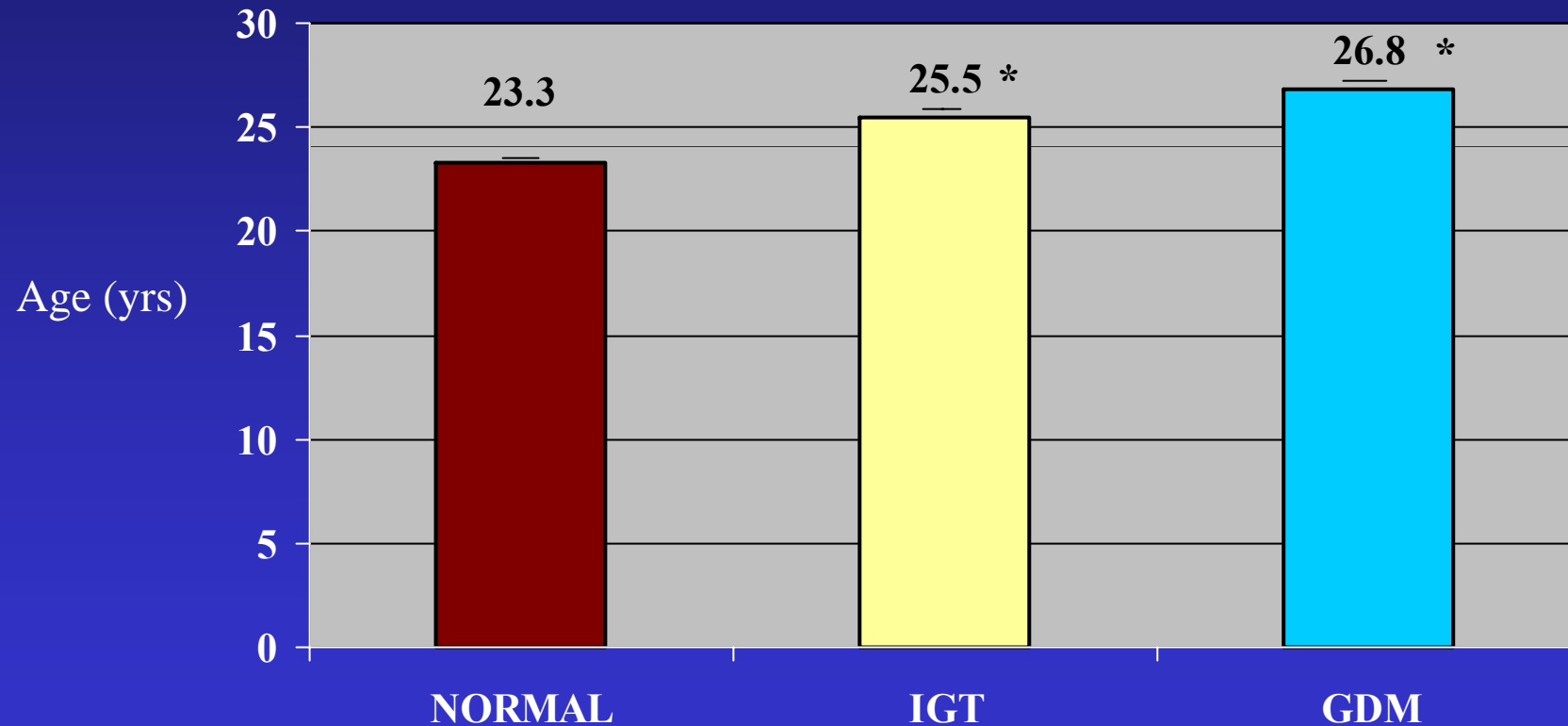
*Different from NORMAL glycemc group, $p < 0.001$

Body Mass Index Entering Pregnancy



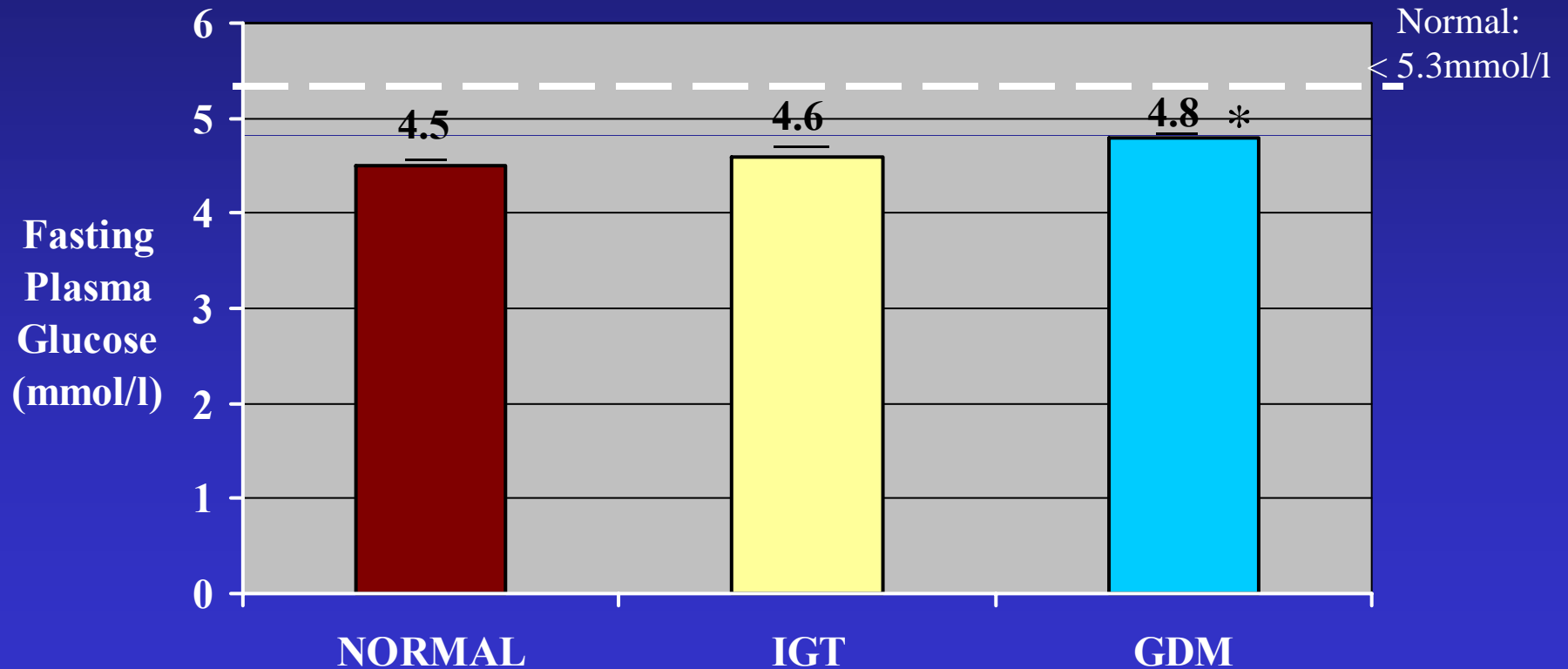
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Maternal Age



*Different from NORMAL glycemic group, $P < 0.001$

Fasting Plasma Glucose Early in Pregnancy



* GDM different from IGT & Normal glycemc group, $p < 0.001$

Infant Birth Weight

Maternal Glycemic Status	Infant Birth Weight (g)	% of Group with Birth Weight >4000g
Normal	3766	32.1
Impaired Glucose Tolerance	3900	39.4
Gestational Diabetes Mellitus	3970	48.5

Summary

- **A quarter of women has abnormal glucose tolerance**
- **Women with IGT and GDM are heavier & older than those with normal glucose tolerance**
- **Women with IGT and GDM are similar**
 - **Body weight, BMI, age**



Conclusion

- **High prevalence of abnormal glucose tolerance**
- **High body weight & increasing age are predisposing characteristics**
- **Importance of universal screening**

Acknowledgement

A photograph of a sunset over the ocean. The sun is low on the horizon, casting a bright glow across the sky and reflecting on the water. The foreground is dark, with silhouettes of tall grasses on either side of a path leading towards the water.

Community Members

Clinic Staff

Cree Board of Health
& Social Services of
James Bay

I. Kovitch, MD

D. Dannebaum, MD

AHFMR, NSTP, C/BAR