Automonitoraggio tecnologico

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ARNAS GARIBALDI - CATANIA

- Il /la dr./sa Letizia Tomaselli dichiara di aver ricevuto negli ultimi due anni compensi o finanziamenti dalle seguenti Aziende Farmaceutiche e/o Diagnostiche:
- - Abbott
- - Roche
- Dichiara altresì il proprio impegno ad astenersi, nell'ambito dell'evento, dal nominare, in qualsivoglia modo o forma, aziende farmaceutiche e/o denominazione commerciale e di non fare pubblicità di qualsiasi tipo relativamente a specifici prodotti di interesse sanitario (farmaci, strumenti, dispositivi medico-chirurgici, ecc.).

«Meaningful monitoring»

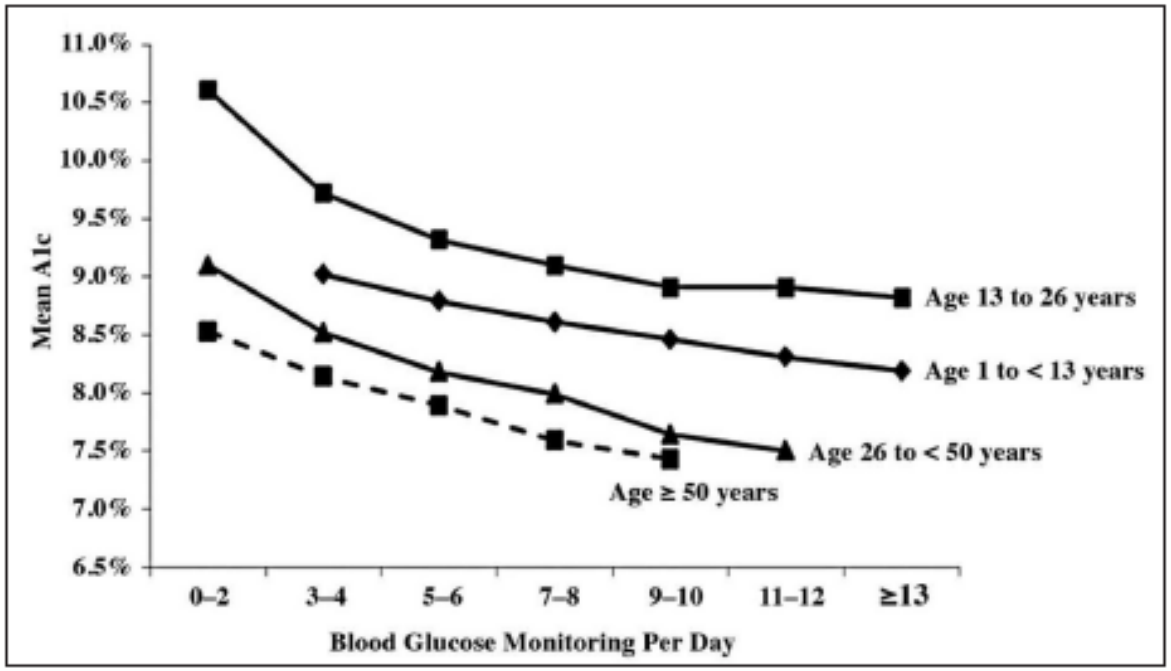


Fig. 2. Association between blood glucose monitoring frequency and A1C in patients with T1DM (70). *A1C* = glycated hemoglobin; *T1DM* = type 1 diabetes mellitus.

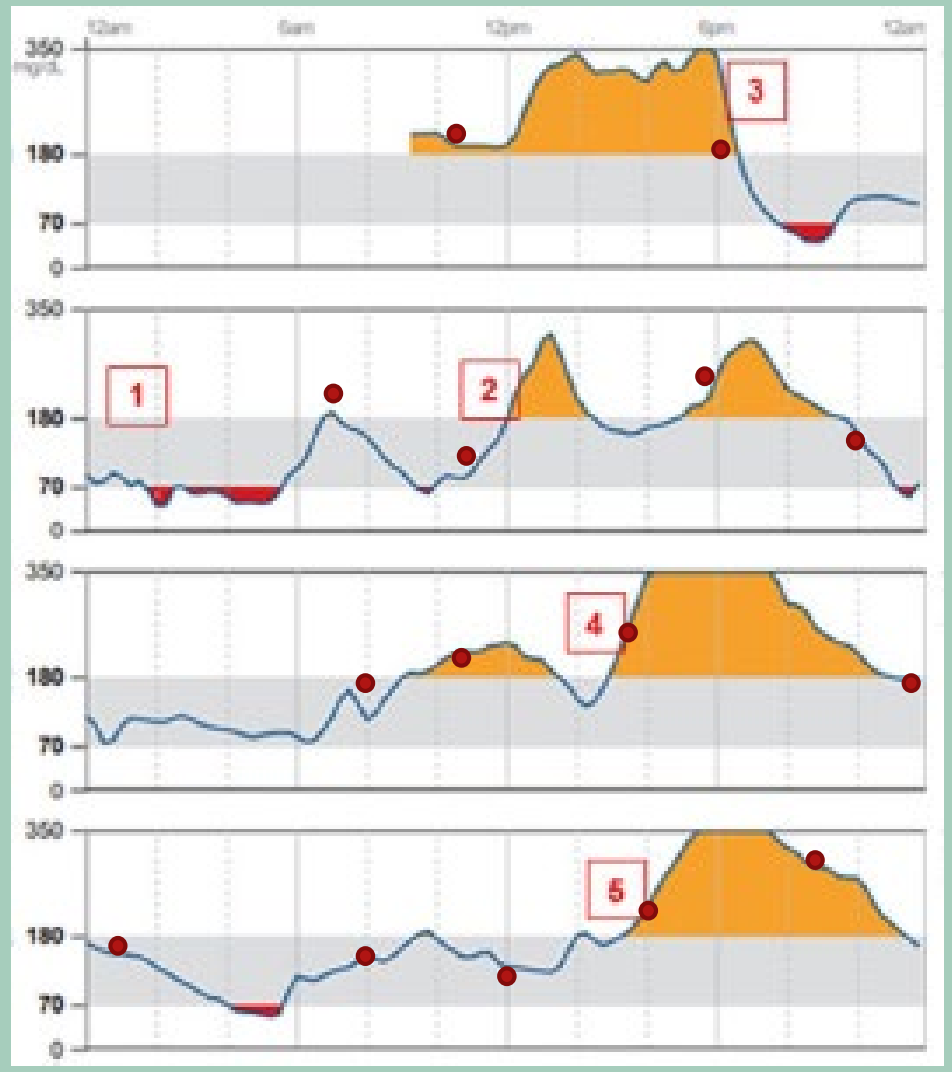
Evidence of a Strong Association Between Frequency of Self-Monitoring of Blood Glucose and Hemoglobin A1c Levels in T1D Exchange Clinic Registry Participants

Diabetes Care 36:2009–2014, 2013

Da SMBG a monitoraggio continuo

- SMBG



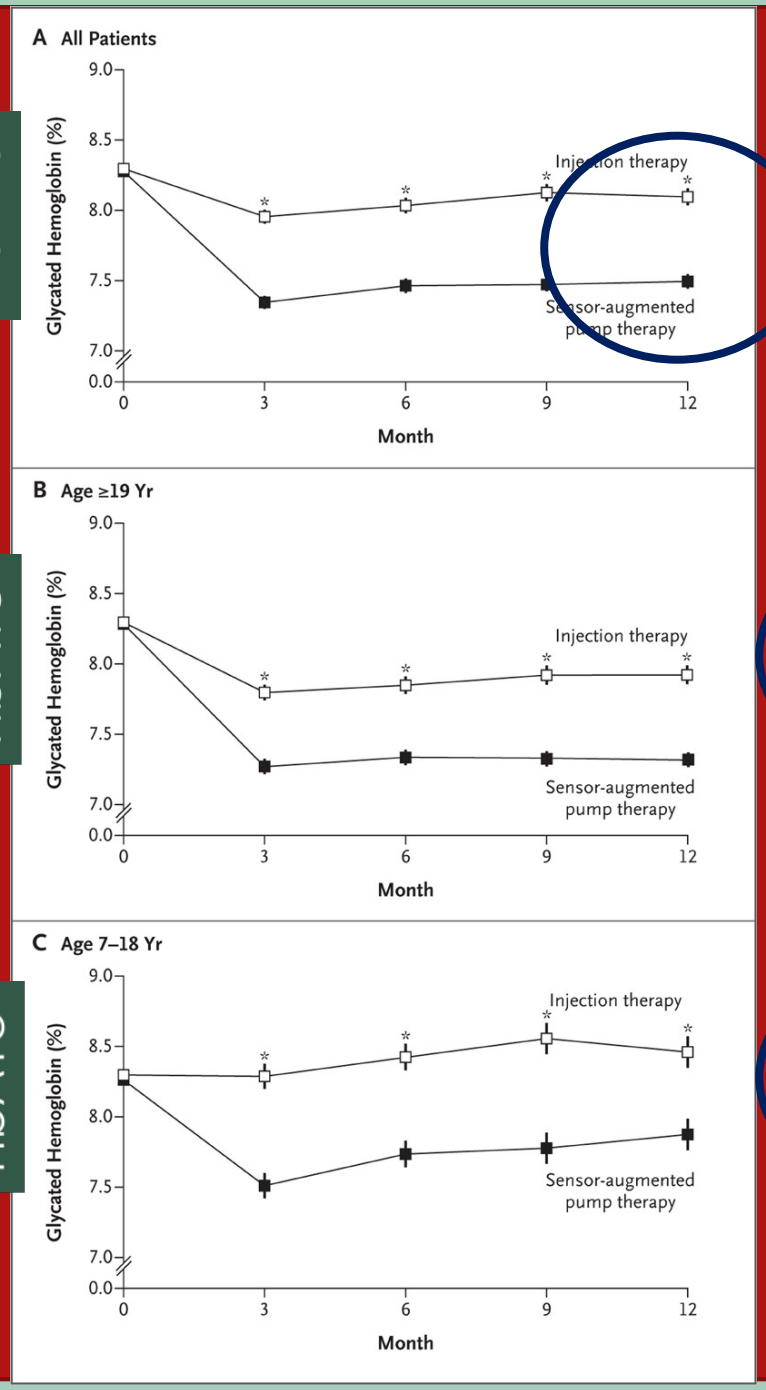


1: IPOGLICEMIA NOTTURNA

2,4,5: IPERGLICEMIA POSTPRANDIALE

3: IPOGLICEMIA DA SOVRAPPOSIZIONE DI CORREZIONI

linico intensivo +
uo: strategia vincente



485 pazienti

Età >19 a.

Età 7-18 a



SAP
(1° step)

bini,

engo

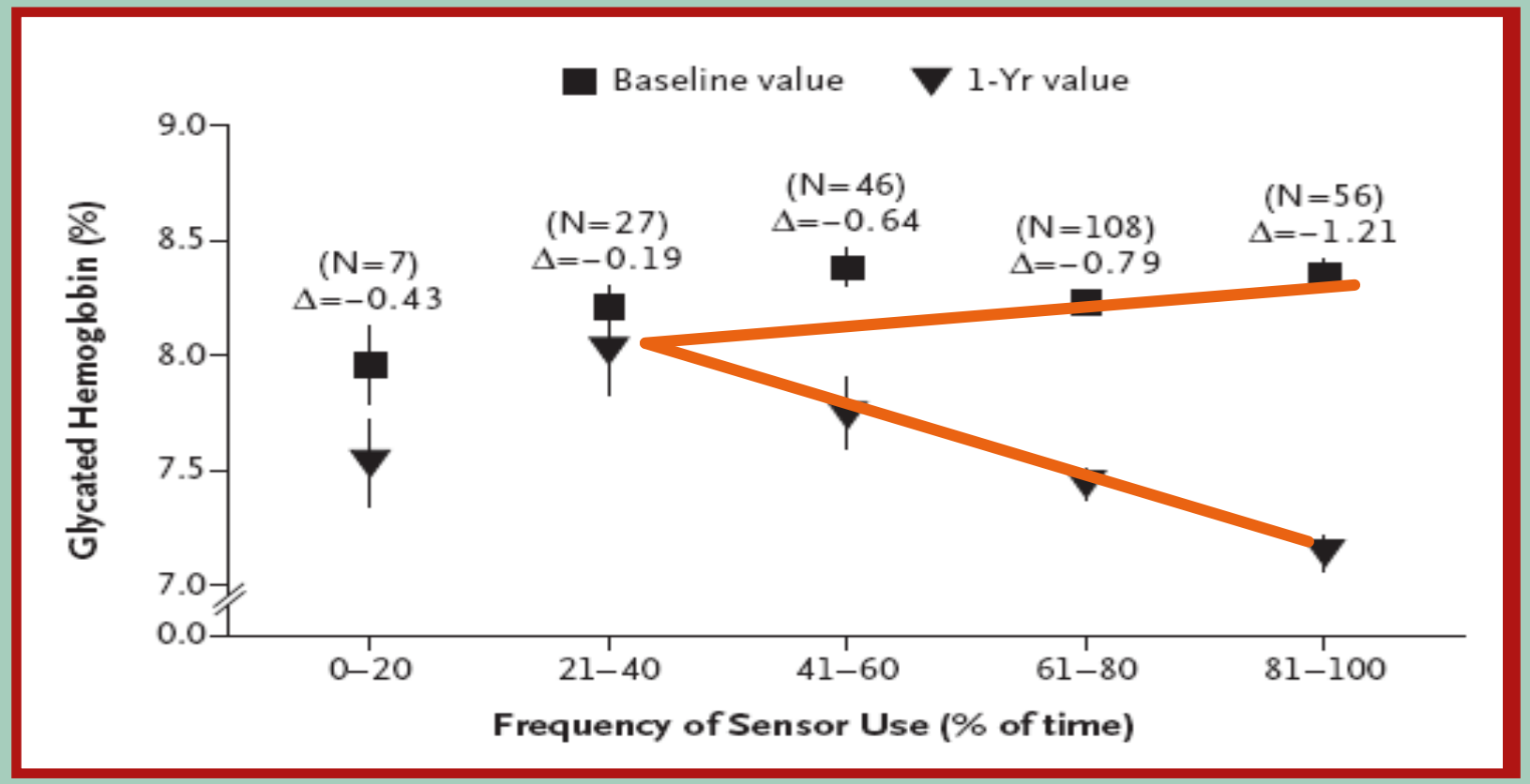
FATTORE DETERMINANTE:
LA FREQUENZA D'USO
DEL MONITORAGGIO
CONTINUO

TAR 3

Frequenza del monitoraggio continuo (% tempo)

SAP

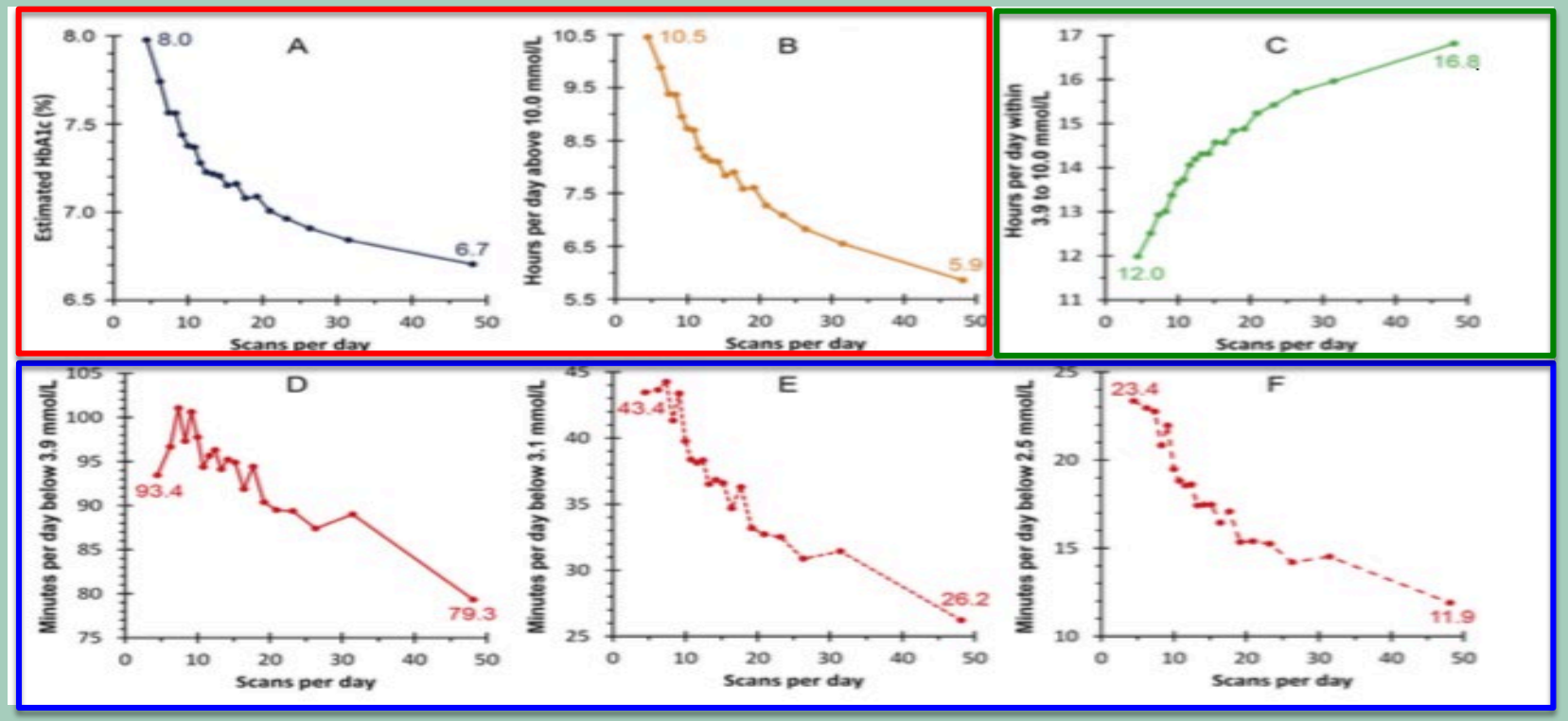
Effectiveness of Sensor-Augmented Insulin-Pump Therapy in Type 1 Diabetes



New England Journal of Medicine, 2010

Frequenza del monitoraggio continuo (n°scan nel flash glucose monitoring)

Real-world flash glucose monitoring patterns and associations between self-monitoring frequency and glycaemic measures: A European analysis of over 60 million glucose tests



Dunn TC et al, Diabetes Research &ClinicalPractice, 2018

CGM: cosa è migliorato nel tempo

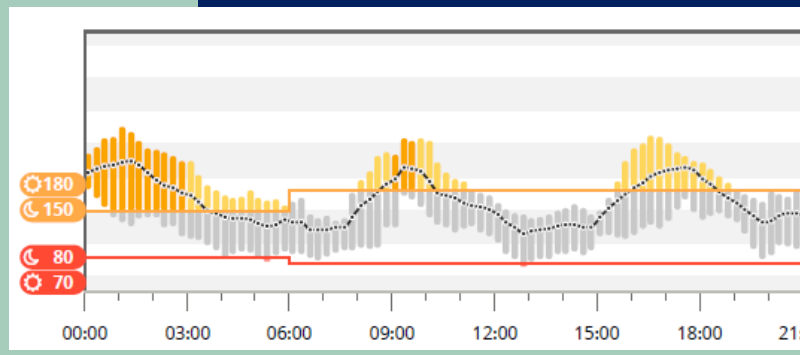
- ✓ Migliora accuratezza (MARD)
- ✓ senza calibrazione
- ✓ Aumenta durata del sensore

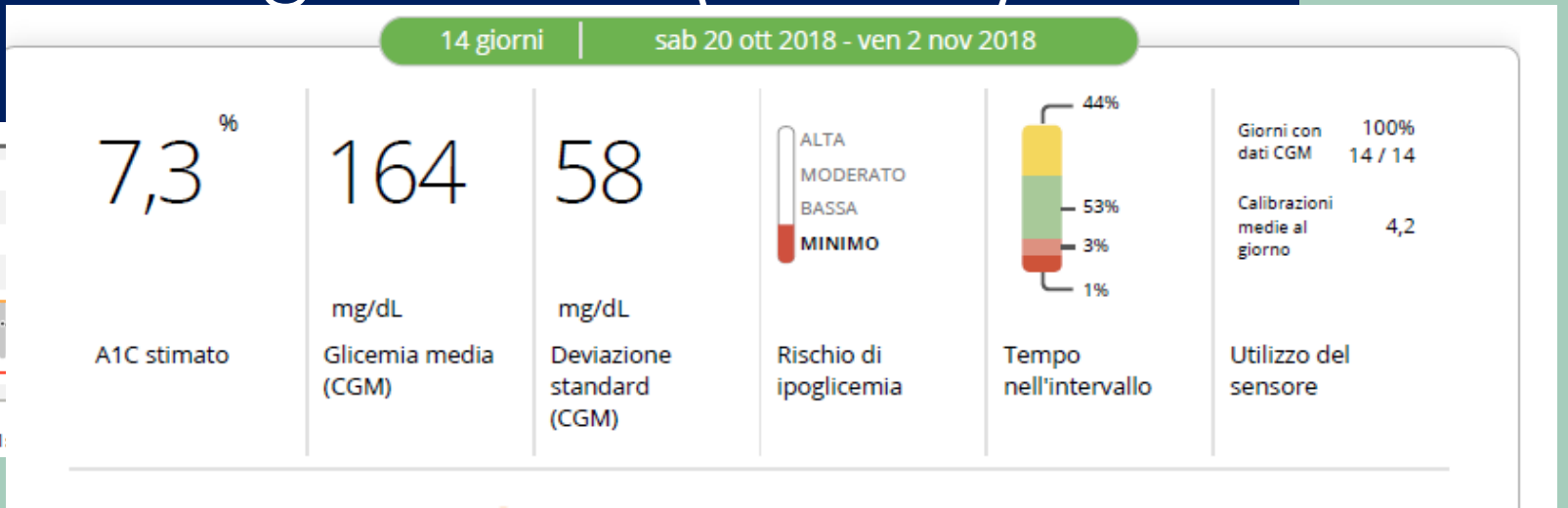
… cosa è rimasto di fondamentale importanza

- ✓ Accurata selezione del paziente adatto
- ✓ Team esperto

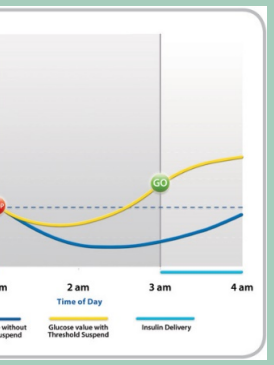
Con il CGM, oltre l'emoglobina glicata

- Frequenza ipoglicemia
- Tempo trascorso in ipo e iperglicemia
- Tempo trascorso in target
- Indici di variabilità glicemica (DS, CV)





Oltre
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DIABETES TECH
Volume 17, Numb
© Mary Ann Liebe
DOI: 10.1089/dia.

ORIGINAL ART

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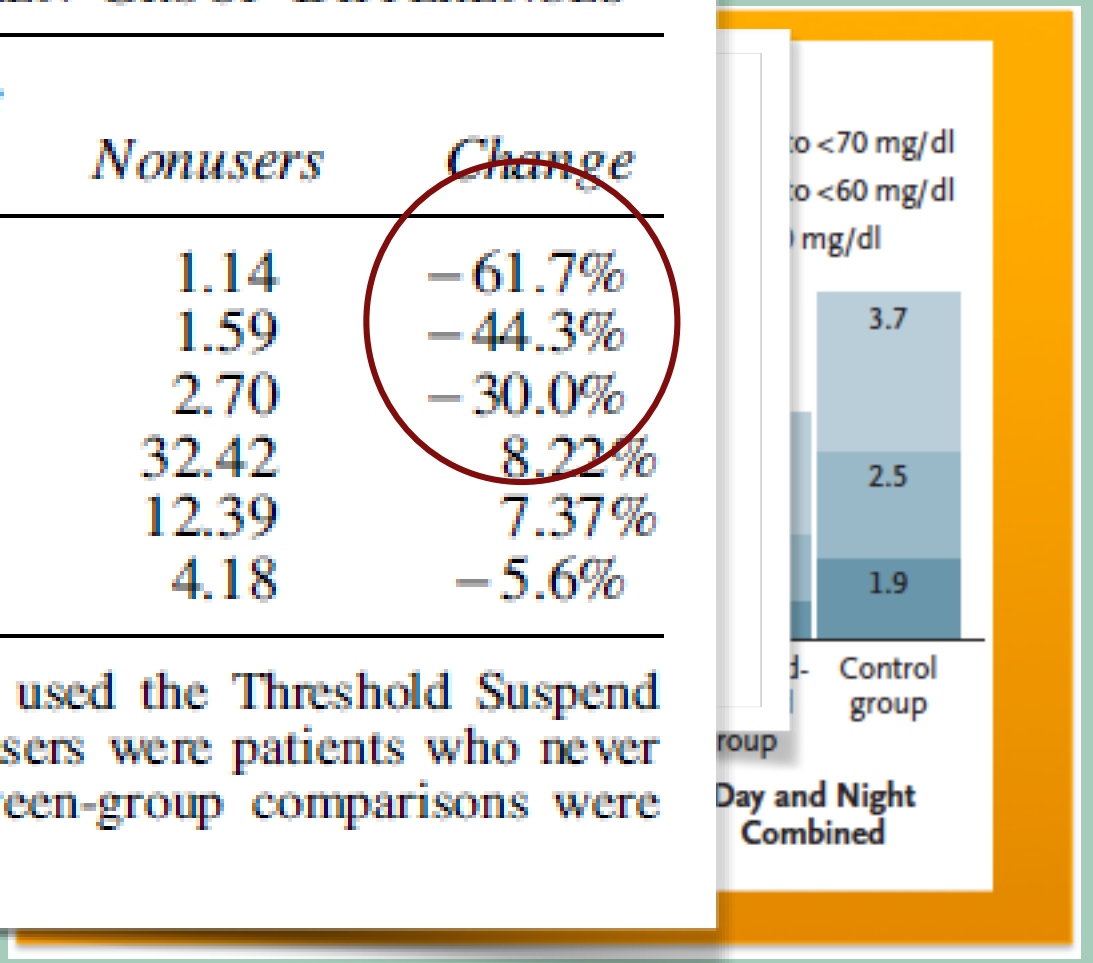
Pratik Agraw
Rajiv Shah, M

C
p

TABLE 1. PERCENTAGES OF SENSOR GLUCOSE VALUES IN VARIOUS RANGES FROM PATIENTS WHO WERE FULL-TIME USERS VERSUS NONUSERS OF THE THRESHOLD SUSPEND FEATURE AND BETWEEN-GROUP DIFFERENCES

Sensor glucose value range (mg/dL)	*Full-time users*	*Nonusers*	*Change*
≤50	0.44	1.14	−61.7%
>50 to 60	0.89	1.59	−44.3%
>60 to 70	1.90	2.70	−30.0%
≥180	35.09	32.42	8.22%
≥240	13.31	12.39	7.37%
≥300	3.95	4.18	−5.6%

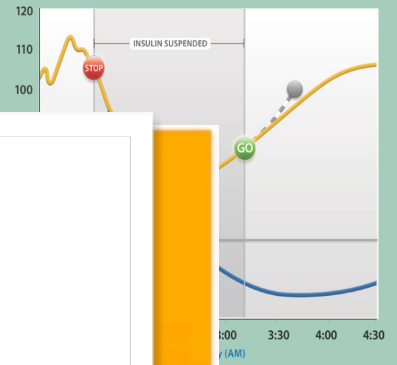
Full-time users were patients who used the Threshold Suspend (TS) feature 100% of the time; nonusers were patients who never used (0%) the TS feature. All between-group comparisons were statistically significant ($P < 0.001$).

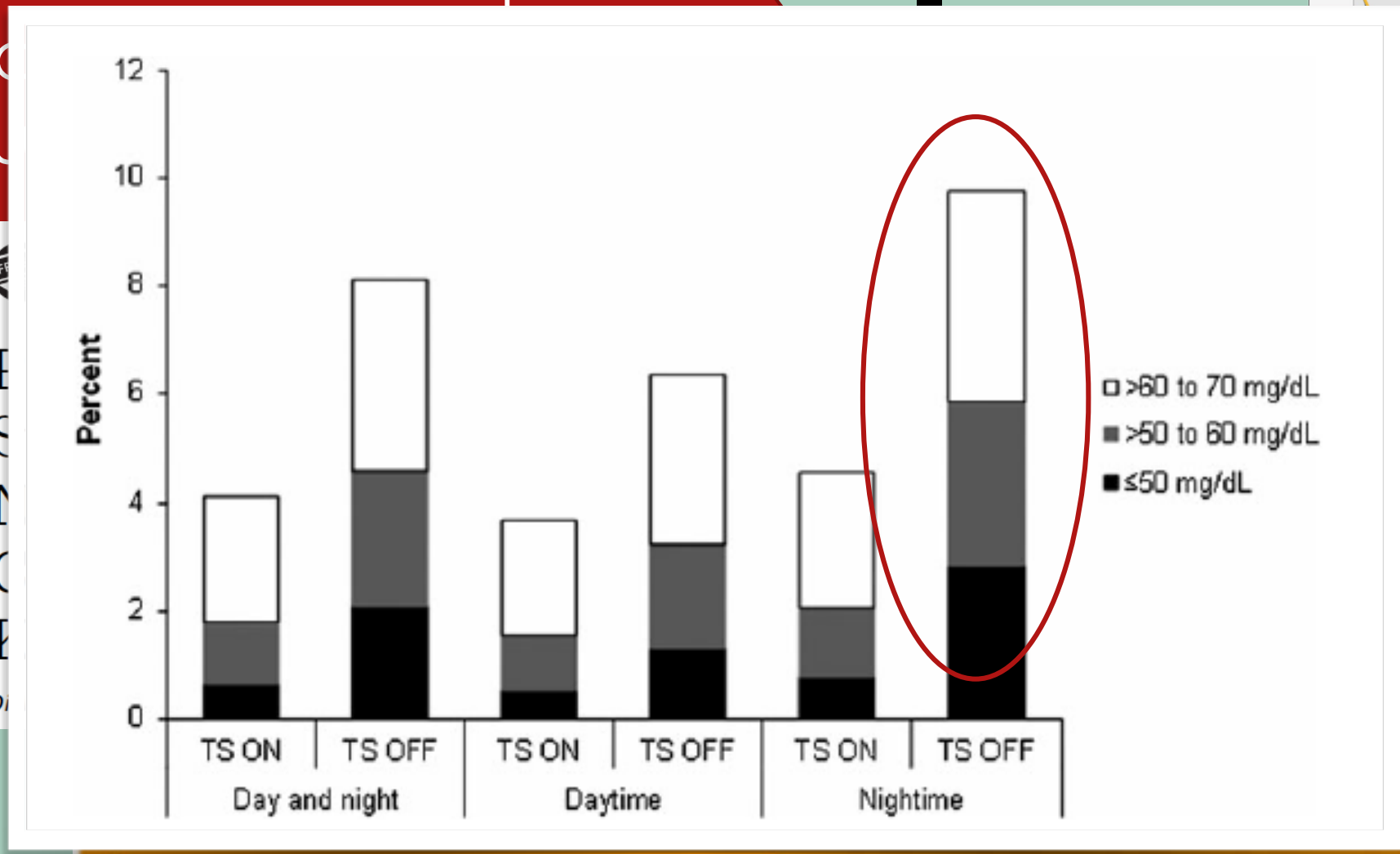


Oltre la SAP: 3° step

Predic

Su





Real Life Hypoglycemia: Retrospective Analysis of the Real-World Use of the Threshold Suspend Feature of Sensor-Augmented Insulin Pumps

CGM in «real life»: economicamente vantaggioso?

- Prospective, observational, multicenter, cohort study
- t
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- M
n

- Hba1c riduce 7.7 a 7.4 (p<0.0001)
- Ospedalizzazioni per chetoacidosi o ipoglicemie si riducono dal 16 % dei pazienti al 4 % (p<0.0005)
- Numero di giorni di ricovero da 54 a 18/100 pazienti/anno (p<0.0005)
- Ridotte assenze dal lavoro per malattia e miglioramento della qualità della vita

Effect of Continuous Glucose Monitoring on Glycemic Control, Acute Admissions, and Quality of Life: A Real-World Study. J Clin Endocrinol Metab 103(3): 1224-32

Quali strategie nel futuro?

… that frequency of use was a strong predictor of success in STAR 3 leads to the question of whether the CGM or the pump is more important in gaining good glucose control…

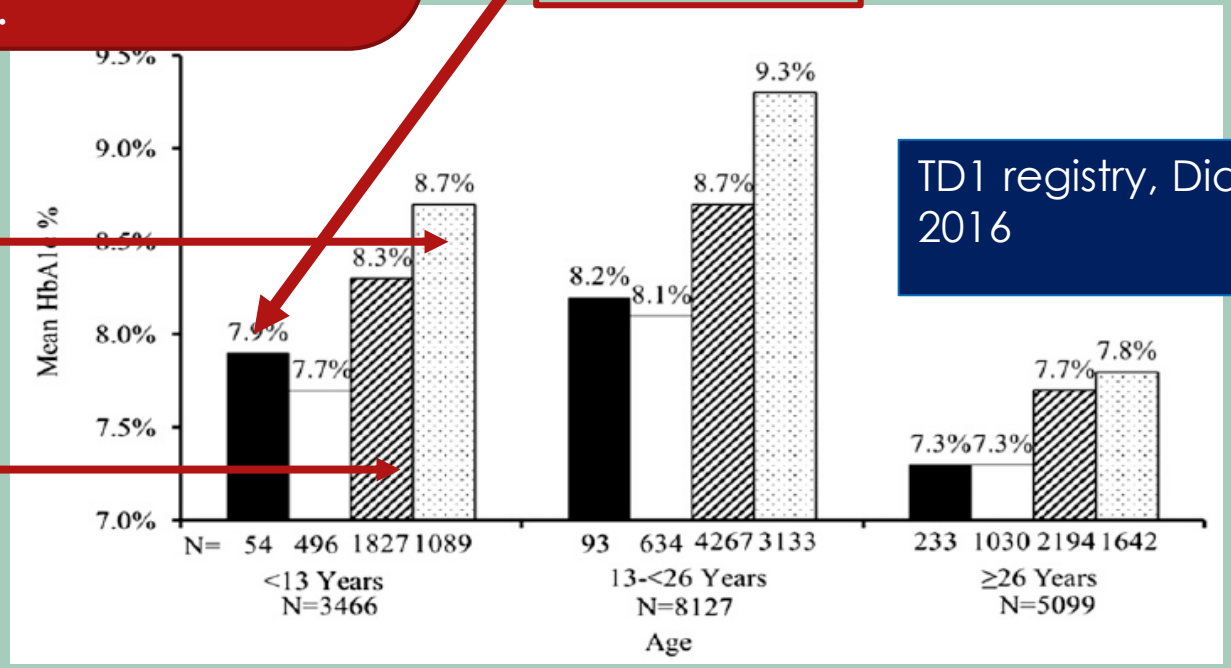
…se Monitoring and Autom…
…ety Clinical Practice Guide…
…ine Society, 2018

The fourth step of "artificial pancreas" development …. functions as a hybrid closed-loop insulin delivery device **(HCL)**

MDI+CGM

MDI

CSII



TD1 registry, Diabetes Care 2016

