ỨNG DỤNG CÔNG NGHỆ VÀ CÁC TIẾN BỘ MỚI TRONG ĐIỀU TRỊ VÀ QUẢN LÝ BỆNH ĐÁI THÁO ĐƯỜNG

Trần-Quang-Khánh
BM Nội tiết – ĐHYD TP.HCM
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SERV30-DIAB-HCM-12-03-2024

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Viện dược phẩm Servier: 1954-2024

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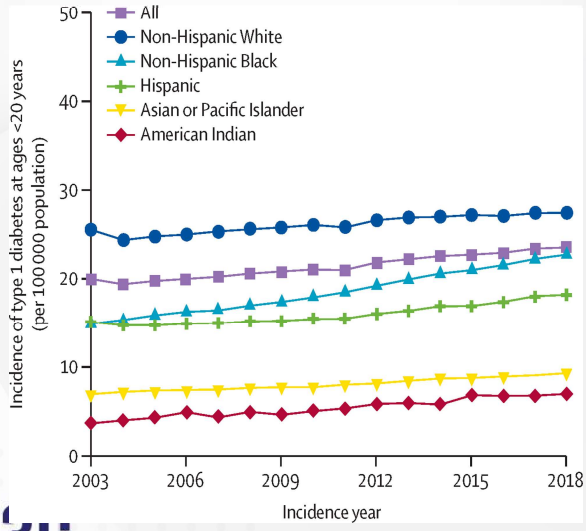
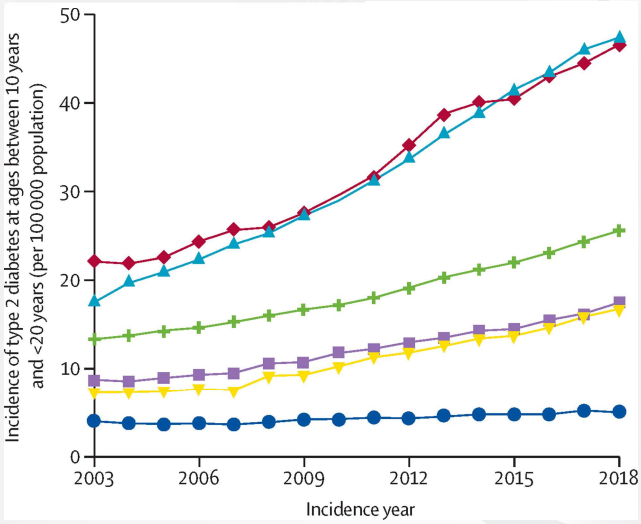
Tần suất ĐTĐ típ 1 & típ 2 ngày càng tăng





Lancet Diabetes Endocrinol 11: 242-250, 2023

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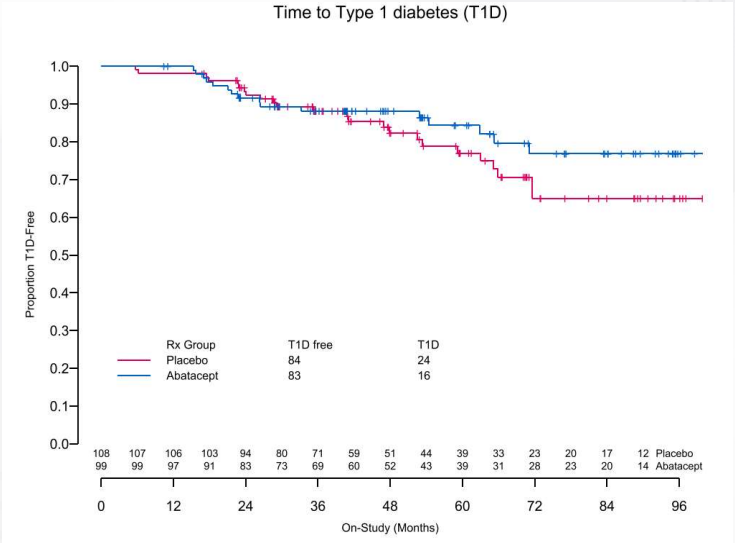
Abatacept và ĐTĐ típ 1



Diabetes Care Volume 46, May 2023

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Tụy nhân tạo và ĐTĐ típ 1

RESEARCH SUMMARY

Multicenter, Randomized Trial of a Bionic Pancreas in Type 1 Diabetes

Bionic Pancreas Research Group DOI: 10.1056/NEJMoa2205225

CLINICAL PROBLEM

Commercially available, hybrid closed-loop insulin-delivery systems require substantial patient input, including basal insulin rates to start therapy and meal carbohydrate counts to determine mealtime insulin doses. In contrast, the bionic pancreas, currently in development by various entities, is highly automated; its technology relies only on body weight to initiate treatment and determine doses and uses qualitative carbohydrate estimates rather than counts at mealtime. Trials comparing the bionic pancreas with standard insulin-delivery methods are needed.

CLINICAL TRIAL

Design: A multicenter, parallel-group, unblinded, randomized trial examined the efficacy and safety of a bionic pancreas as compared with standard care in children and adults with type 1 diabetes.

Intervention: 326 participants 6 to 79 years of age who had been using insulin for at least 1 year were assigned either to automated glucose control with the bionic pancreas (with insulin aspart or insulin lispro) or to standard care with their current insulin-delivery method (multiple injections, pump, or hybrid closed-loop system) plus a continuous glucose monitor. The primary outcome was the glycated hemoglobin level at 13 weeks.

RESULTS

Efficacy: The mean glycated hemoglobin level decreased over the 13-week trial in the bionic-pancreas group and remained unchanged in the standard-care group, which resulted in a significant difference between the groups at 13 weeks.

Safety: The rate of severe hypoglycemia did not differ significantly between the groups. There were no episodes of diabetic ketoacidosis in either group.

LIMITATIONS

- Hypoglycemia as measured at baseline by continuous glucose monitors was infrequent; thus, the effects of the bionic pancreas on reducing the risk and severity of hypoglycemia could not be assessed.
- Approaches to managing and reporting hyperglycemia and ketosis differed between the two groups.

Links: Full Article | NEJM Quick Take | Editorial

Bionic Pancreas N=219

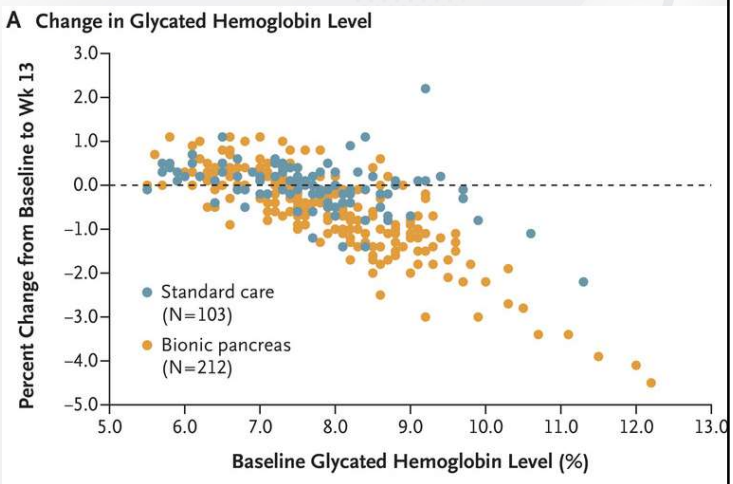
Standard Care N=107

Glycated Hemoglobin Level

Change in Glycated Hemoglobin Level at 13 Wk

CONCLUSIONS

In children and adults with type 1 diabetes, use of a bionic pancreas for 13 weeks resulted in a greater reduction in the glycated hemoglobin level than standard care, with no apparent safety concerns.



N Engl J Med 387: 1161-1172, 2022

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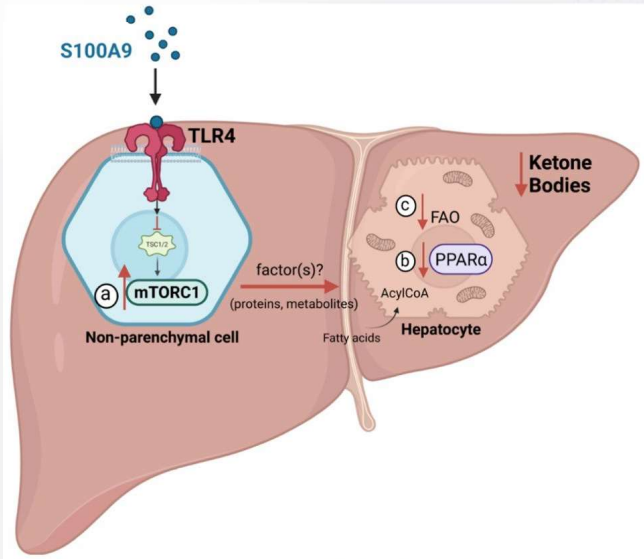
Điều trị DKA sẽ dễ dàng hơn với rS100A9



NATURE COMMUNICATIONS | (2022) 13:4107

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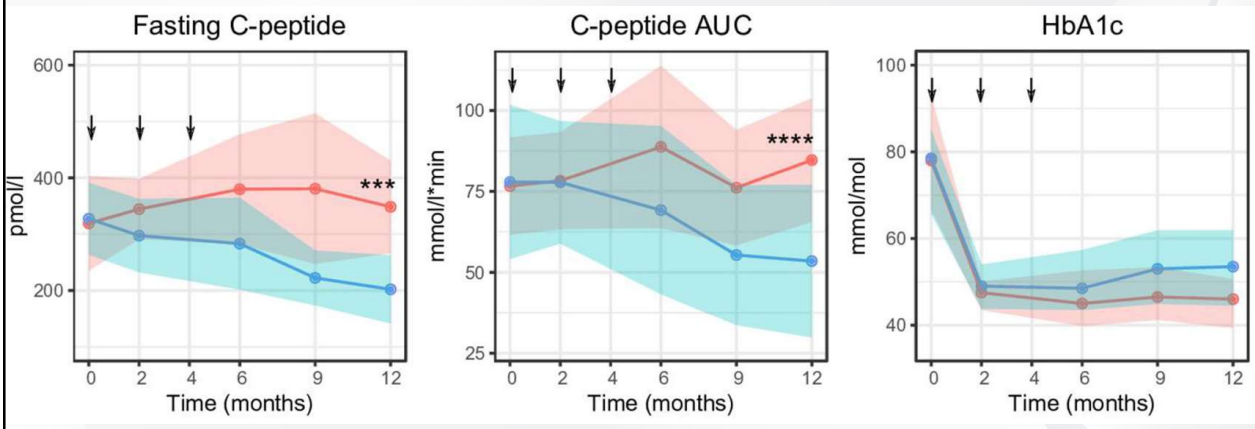
FMT và ĐTĐ típ 1



de Groot P, et al. Gut 2021;**70**:92–105

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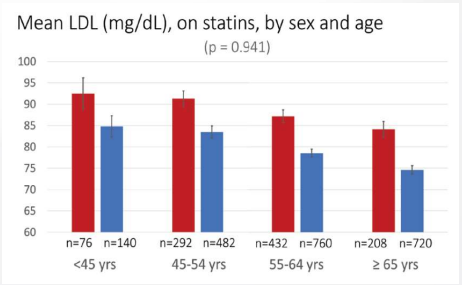
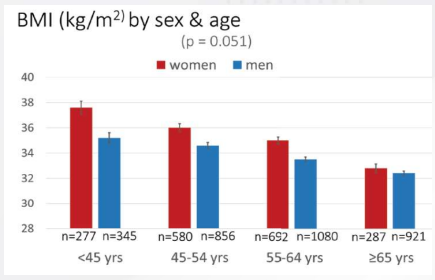
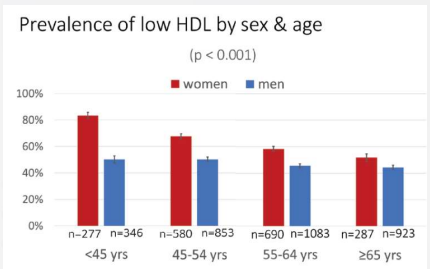
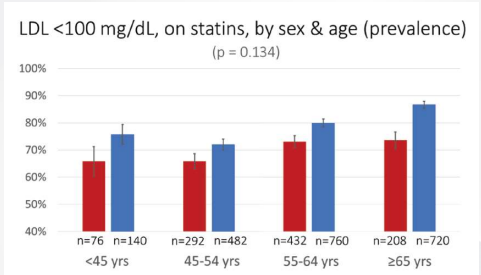
Yếu tố nguy cơ tim mạch ở bn ĐTĐ tip 2: nữ cao hơn nam









BMJ Open Diab Res. Care 2023;11:e003159.

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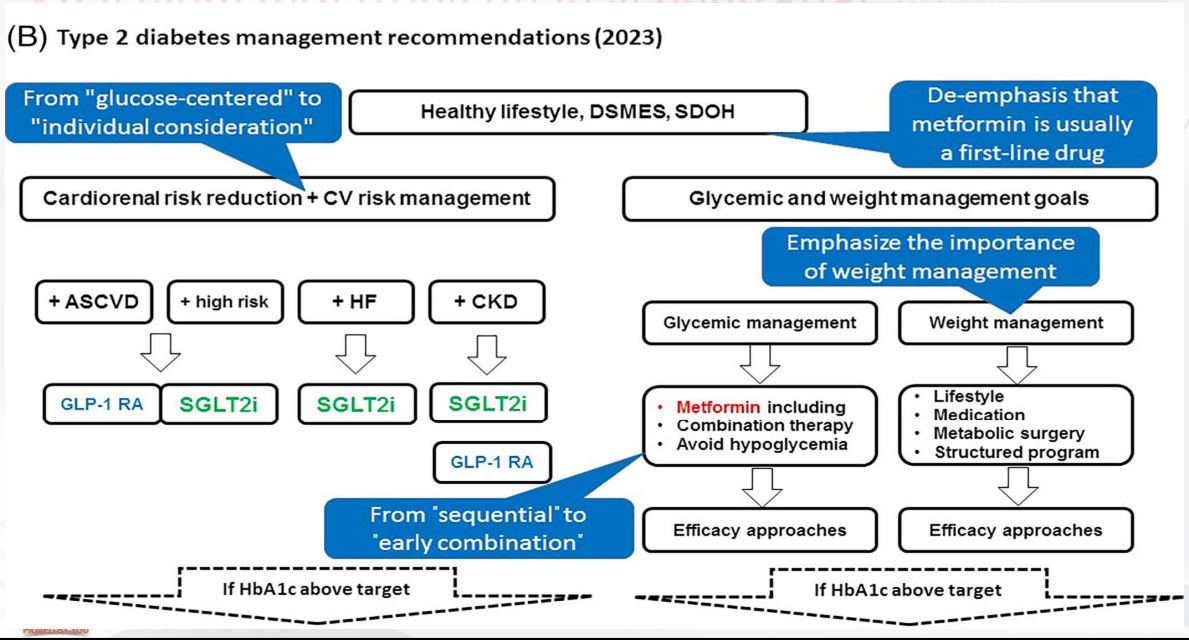
Khái niệm mới trong quản lý bệnh ĐTĐ



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Vai trò giảm cân sớm trong quản lý tiền ĐTĐ

Table 1—Percentage weight change and clinical outcomes at baseline by group and the change in outcomes by group at the 4-month follow-up

	Baseline (mean ± SE)			Change from baseline at 4 months (mean ± SE)		
Outcome	GLB (*n* = 80)	GLB+ (*n* = 111)	*P* value†	GLB (*n* = 80)	GLB+ (*n* = 111)	*P* value†
Weight change (%)	—	—	—	−8.13 ± 0.48***	−3.46 ± 0.31***	<0.0001††
Body weight (kg)	102.60 ± 2.71	102.46 ± 2.30	0.9701	−8.36 ± 0.48***	−3.63 ± 0.41***	<0.0001
BMI (kg/m^2)	35.68 ± 0.85	37.07 ± 0.72	0.2119	−2.84 ± 0.17***	−1.27 ± 0.14***	<0.0001
AIC (%)	5.69 ± 0.03	5.68 ± 0.03	0.7324	−0.20 ± 0.02***	−0.12 ± 0.02***	0.0045
A1C (mmol/mol)	38.69 ± 0.36	38.53 ± 0.30	0.7324	−2.21 ± 0.25***	−1.26 ± 0.21***	0.0045
Fasting glucose (mmol/L)‡	6.06 ± 0.06	5.97 ± 0.05	0.2708	−0.39 ± 0.06***	−0.18 ± 0.05**	0.0112
Total cholesterol (mmol/L)	5.08 ± 0.11	5.12 ± 0.10	0.7991	−0.30 ± 0.08***	0.03 ± 0.07	0.0020
LDL cholesterol (mmol/L)	3.0 ± 0.10	3.1 ± 0.09	0.4517	−0.19 ± 0.07**	−0.06 ± 0.06	0.1733
HDL cholesterol (mmol/L)	1.32 ± 0.05	1.34 ± 0.04	0.7876	−0.05 ± 0.03	0.02 ± 0.02	0.1023
Triglycerides (mmol/L)§	0.38 ± 0.04	0.36 ± 0.04	0.6988	−0.15 ± 0.04***	0.08 ± 0.04	<0.0001
Blood pressure						
Systolic (mmHg)	127.06 ± 1.64	123.92 ± 1.39	0.1457	−4.87 ± 1.63**	−1.19 ± 1.37	0.0846
Diastolic (mmHg)	85.84 ± 1.08	84.34 ± 0.91	0.2899	−3.39 ± 1.18**	−0.65 ± 1.0	0.0780

Diabetes Care 2022;45:2452–2455

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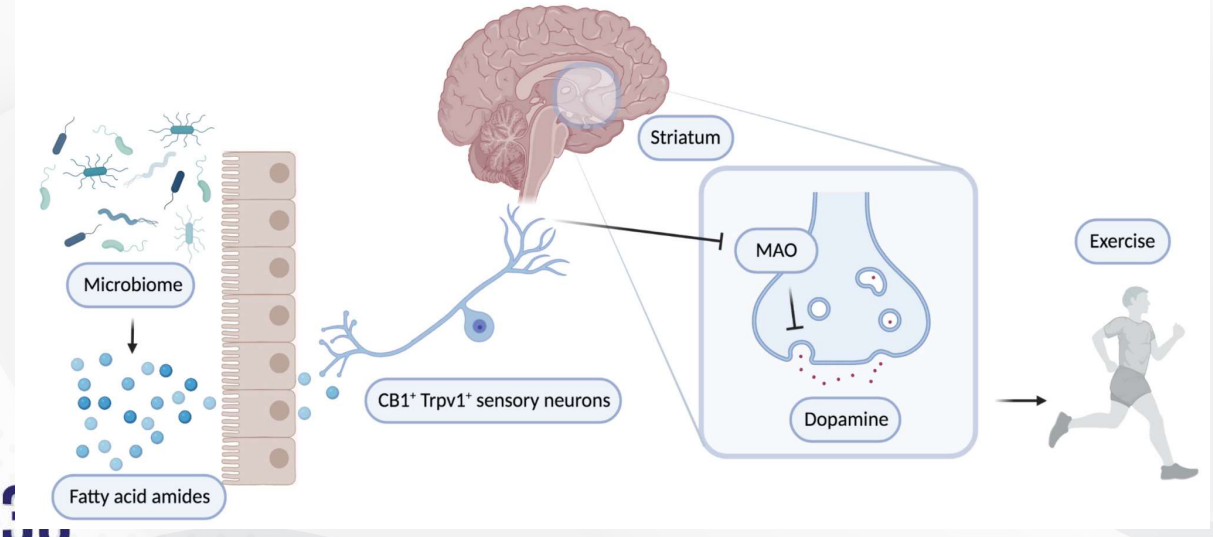
Microbiome đường ruột và vận động



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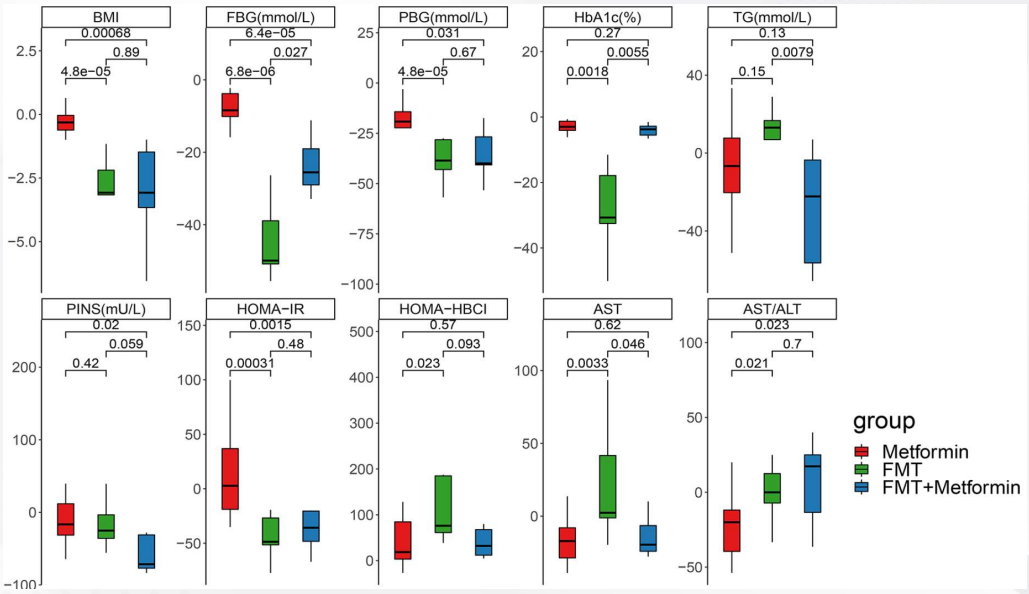
FMT cải thiện tình trạng đề kháng insulin



Front. Cell. Infect. Microbiol.12:1089991.doi: 10.3389/fcimb.2022.1089991

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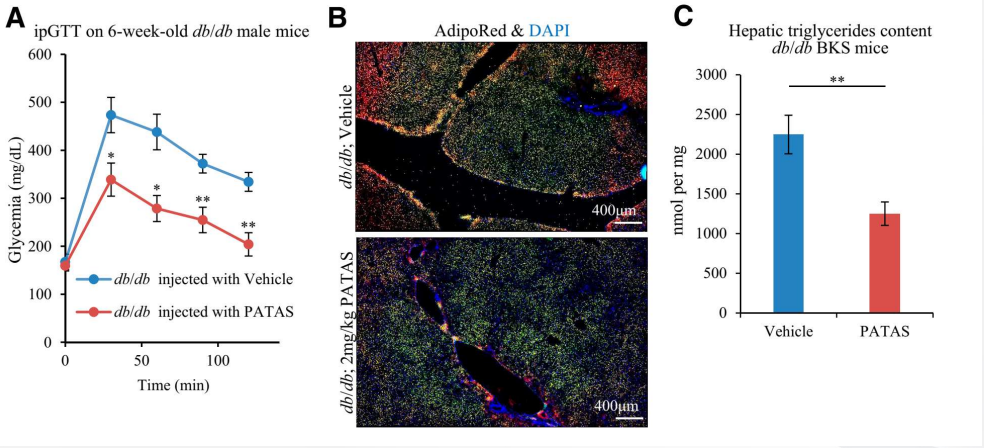
Patas: 2 trong 1

Paul Zimmet

"the discovery was potentially one of the most important I had seen in my 45 years of diabetes research"



Diabetes Volume 71, September 2022

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GLP-1RA Semaglutide và cuộc chiến chống béo phì

SELECT trial: primary and confirmatory secondary endpoints

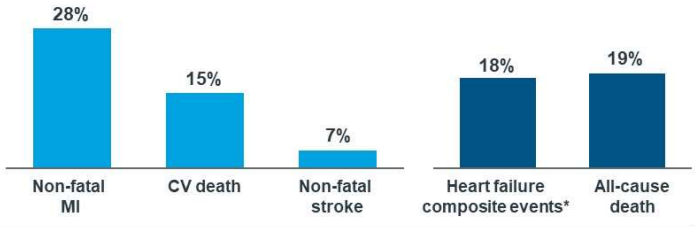
Beneficial effects of semaglutide 2.4 mg on cardiovascular risk vs. placebo

Primary endpoint
(top-line readout, 8 Aug. 2023)

20%
relative risk reduction in MACE-3 events
(statistically significant)

MACE-3 components
(relative risk reduction)

Confirmatory secondary endpoints
(relative risk reduction)



Statistical significance achieved over length of trial

Since CV death, the first confirmatory secondary endpoint, missed statistical significance, the remaining secondary confirmatory endpoints were not tested for superiority due to hierarchical testing

* Including cardiovascular death, urgent heart failure visits and hospitalisations

Source: Lincoff A, Brown-Frandsen K, Colhoun H, et al. Semaglutide and Cardiovascular Outcomes in Obesity without Diabetes. N Engl J Med. DOI: 10.1056/NEJMoa2307563.; IQVIA EMEA Thought Leadership

IQVIA

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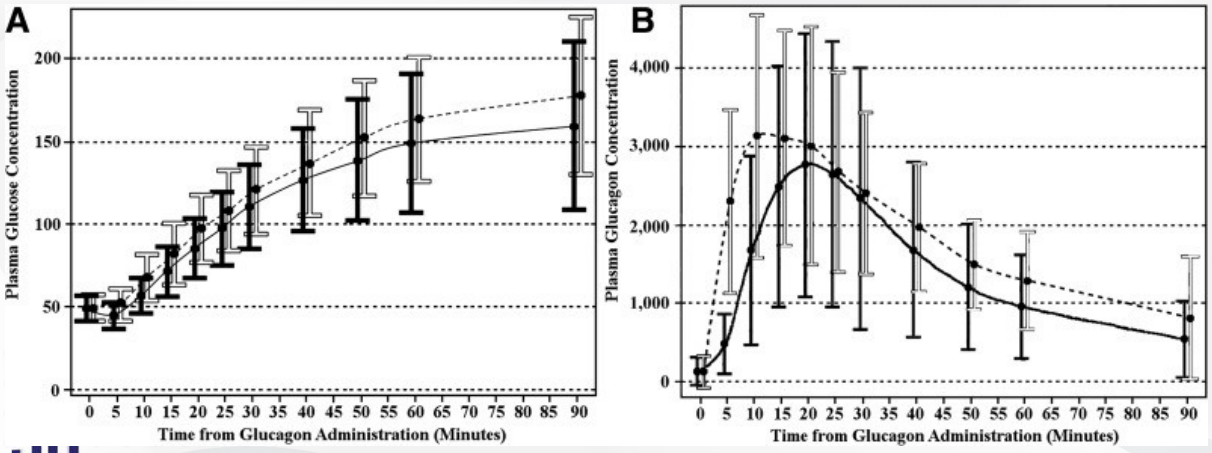
Từ Glucagen Hypokit sang Baqsimi



Diabetes Care. 2016 Feb; 39(2): 264–270

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Tiêm insulin không cần kim: miếng dán insulin

Thuận tiện

Kín đáo

Không cần kim

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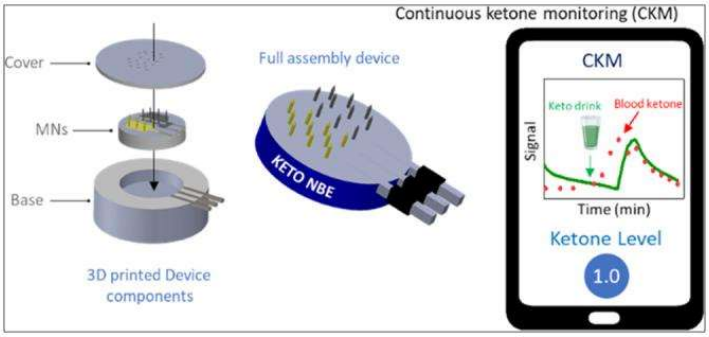
CKM/CGM và *lab-on-a-chip*: Cuộc cách mạng trong phòng ngừa và điều trị DKA



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