

IDF World Diabetes Congress, 7.–10. apríla 2025, Bangkok: slovenská stopa na medzinárodnom podujatí

Adriana Ilavská

Diabetologická a metabolická ambulancia Medispektrum s.r.o., Bratislava

✉ MUDr. Adriana Ilavská, PhD., MBA, MPH | ilavska@medispektrum.com | www.medispektrum.com
Doručené do redakcie | Received 7. 7. 2025



V dňoch 7. až 10. apríla 2025 sa v thajskom Bangkoku uskutočnil prestížny IDF World Diabetes Congress 2025 organizovaný Medzinárodnou diabetologickou federáciou (International Diabetes Federation – IDF). Na podujatie, ktoré sa koná každé dva roky, sa prihlásilo viac než 6 800 odborníkov z vyše 165 krajín. Diskutovalo sa o najnovších trendoch v oblasti prevencie, diagnostiky a liečby diabetu, s dôrazom na globálne výzvy a technologické inovácie.

Kongres sa konal len 10 dní po silnom zemetrasení, ktoré zasiahlo región juhovýchodnej Ázie. Napriek týmto okolnostiam organizátori zvládli celý priebeh podujatia s obdivuhodnou profesionalitou, bez narušenia vedeckého programu či komfortu účastníkov. Slovensko reprezentovalo šesť účastníkov, pričom dvaja z nich mali aktívnu odbornú účasť.

Výsledky štúdie IDEAL

Peter Novodvorský (IKEM Praha) prezentoval výsledky klinickej štúdie IDEAL. Ide o prvú randomizovanú klinickú štúdiu, ktorá nadviazala na predchádzajúce prospektívne nerandomizované štúdie a preukázala efektívitu a bezpečnosť simplifikácie (deintenzifikácie) intenzifikovanej inzulínovej terapie (IIT) u pacientov s diabetom 2. typu (DM2T) prechodom na 1-krát denne podávanú fixnú kombináciu inzulínu glargín U100 a GLP1-RA lixisenatidu (iGlarLixi).

Do štúdie bolo zaradených 92 pacientov s DM2T, randomizovaných v pomere 1 : 1 na pokračovanie IIT alebo prechod na iGlarLixi. Po 6 mesiacoch aktívnej fázy štúdie bol pokles hodnoty HbA_{1c} porovnateľný v oboch skupinách. V skupine na iGlarLixi však došlo k signifikantnému poklesu hmotnosti, celkovej dennej dávky inzulínu, redukcii počtu injekcií a hypoglykémii. Z hľadiska vyhodnotenia kontinuálnych glukózových monitoríngov došlo k signifikantnému nárastu času stráveného v cieľovom rozmedzí (Time In Range – TIR) pri súčasnom poklese času strávenom v hyperglykémii (Time Above Range – TAR), ďalej k poklesu priemernej hodnoty glukózy a k zlepšeniu celkovej kvality CGM záznamu (vyjadrené pomocou tzv. Glycemia Risk Index – GRI). V skupine na iGlarLixi došlo tiež k zlepšeniu kvality života pacientov podľa dotazníka DTSQ.

Umelá inteligencia (AI) v skríningu diabetickej retinopatie

Linda Ilavská a Adriana Ilavská (Lekárska fakulta Univerzity Komenského, Medispektrum s.r.o. a Università di Pavia, Taliansko) prezentovali výsledky implementácie umelej inteligencie v skríningu diabetickej retinopatie (DR) v bežnej diabetologickej ambulantnej praxi. Poster s názvom **The AI-based software with a digital non-mydrriatic camera provides an efficient tool for diabetic retinopathy screening** predstavil praktickú skúsenosť s použitím AI systému na vyhodnotenie snímok očného pozadia pacientov s diabetom. Medzi 694 analyzovanými pacientmi bola diabetickej retinopatie (DR) prítomná u 201 jedincov (29,0 %). Závažnosť DR bola hodnotená podľa Medzinárodnej klinickej klasifikácie diabetickej retinopatie (International Clinical Diabetic Retinopathy Disease Severity Classification – ICDR): mierna DR u 128 (18,4 %), stredne závažná DR u 62 (8,9 %), ťažká DR u 7 (1,0 %), proliferatívna DR u 4 diabetikov (0,6 %). Štatistická analýza potvrdila signifikantnú koreláciu medzi dlhším trvaním diabetu a horšou metabolickou kontrolou a prítomnosťou DR.

Zatiaľ čo hlásená prevalencia DR v populácii je približne 19 %, v sledovanej kohorte známky DR rôzneho stupňa boli detekované u 29 % vyšetrených. Implementácia AI-podporeného skríningu v rámci rutínnej starostlivosti zvyšuje dostupnosť, podporuje včasnú

Obr. 1 | Peter Novodvorský prezentuje výsledky štúdie IDEAL



terapeutické zásahy s cieľom spomaliť progresiu retinopatie.

Obe prezentácie – klinická aj inovatívna aplikačná – poukázali na schopnosť odborníkov zo Slovenska prispievať k vývoju modernej, efektívnej a patientsky orientovanej diabetologickej starostlivosti. Účast' na IDF 2025 zároveň otvorila nové príležitosti pre medzinárodnú spoluprácu, najmä v oblasti výskumu, inovatívneho klinického postupu a aplikácie digitálnych technológií v diabetológii.

Nasledujúci IDF World Diabetes Congress 2027 sa bude konať v Doha (Katar) v termíne 10.–12. apríla 2027. Očakáva sa, že podujatie prinesie ďalšie prepojenie inovácií, výskumu a globálneho úsilia v boji proti cukrovke a jej komplikáciám.

Obr. 2 | Linda Ilavská a kol. – prezentované výsledky skríningu diabetickej retinopatie pomocou AI vo forme posteru

The AI-based software with a digital non-mydratric camera provides an efficient tool for diabetic retinopathy screening

Ilavská L. ^{1,2,3}, Ilavská A. ³

¹ Faculty of Medicine, Comenius University Bratislava, Slovakia
² University Di. Práv., The Medical Faculty, Pavla Jozef
³ Endokrinologické Diabetologické Oddelenie, Bratislava, Slovakia

IDF 2025 BANGKOK

Background
Diabetic retinopathy (DR), a leading cause of vision loss among diabetic patients, is a growing global health concern. According to the National Health Information Center, the prevalence of DR in Slovakia is 19%. However, only half of diabetic patients undergo regular ophthalmological examinations, highlighting the need for improved screening strategies. The use of AI-assisted non-mydratric fundus imaging during routine diabetes consultations has the potential to support and enhance ophthalmological screening through early DR detection.

Aim
This study aimed to determine the occurrence of DR in a real-world diabetes outpatient clinic setting and evaluate the effectiveness of AI-assisted digital non-mydratric fundus imaging for screening DR in patients with type 2 diabetes mellitus (T2DM).

Methods
A total of 750 adult patients with T2DM underwent routine fundus imaging during their diabetes consultation. Of these 320 women and 430 were men. The mean age of the study cohort was 54.6 years (range: 32–86 years). The mean diabetes duration was 8.6 years (range: 1–29 years). Fundus photography of both eyes was performed using the non-mydratric DRispus® fully automated digital camera featuring TrueColor Confocal technology (Care, Finland). The images were analyzed with iCare RETCAD™ software (Figure 1). For analysis, 694 patients (91.8%) met the image quality criteria, and both eyes were evaluated separately. All patients with were referred for ophthalmological assessment.

Results
Among the 694 analyzed patients:
DR was present in 201 patients (29.0%), while absent in 493 patients (71.0%) (Figure 2).
Breakdown of DR severity (International Clinical Diabetic Retinopathy Severity Classification): mild DR: 128 patients (11.8%), moderate DR: 62 patients (8.9%), severe DR: 7 patients (1.0%), proliferative DR: 4 patients (0.9%) (Figure 3).
Statistical analysis demonstrated a significant association between longer diabetes duration and the presence of DR ($p < 0.001$). Mean HbA1c was 8.1% (SD ± 1.3) in the DR group versus 6.9% (SD ± 1.1) in the non-DR group ($p = 0.002$). This suggests that patients with DR have significantly poorer metabolic control.

Conclusion
Our findings confirm that AI-assisted non-mydratric fundus imaging is an effective tool for early DR detection. In routine diabetes consultations, this method enables a quick and efficient examination, which can significantly contribute to promoting ophthalmological check-ups and early DR detection, particularly in settings where only half of patients currently attend regular eye screenings. The reported prevalence of DR is 19%, whereas our screening identified 29% of patients with DR of varying severity, highlighting a significant disparity in detection rates. Implementing this technology in routine diabetes care enhances screening rates, supports timely clinical interventions, and facilitates better metabolic control to prevent DR progression.

The findings revealed a difference between the known prevalence of DR and the prevalence detected when every diabetic patient is screened.
Our results show that one-third of DR cases remain undetected when only those attending ophthalmological check-ups are considered.

Acknowledgment
This project was supported by iCare Finland Oy, the University Students Grant Program by Tatna banka Foundation, Slovakia, and Diabera Health Insurance Company, Slovakia, in part of the grant program "Optics for Health".

References
1. World Health Organization. Diabetes. Fact sheet No. 1136. Geneva: WHO; 2023.
2. National Health Information Center. Diabetes in Slovakia. Bratislava: NHC; 2023.
3. Ilavská L, Ilavská A, et al. AI-assisted non-mydratric fundus imaging for diabetic retinopathy screening: a pilot study. Diabetologia. 2024;67(12):2100–2105.
4. International Diabetes Federation. IDF Diabetes Atlas, 10th edn. Brussels, Belgium: IDF; 2021.
5. American Diabetes Association. Standards of Medical Care in Diabetes—2023. Diabetes Care. 2023;46(Suppl 1):S1–S207.
6. American Diabetes Association. 10.5. Retinopathy, nephropathy, and other long-term complications. Diabetes Care. 2023;46(Suppl 1):S133–S140.
7. American Diabetes Association. 10.6. Diabetes and eye care. Diabetes Care. 2023;46(Suppl 1):S141–S147.
8. American Diabetes Association. 10.7. Diabetes and kidney disease. Diabetes Care. 2023;46(Suppl 1):S148–S154.
9. American Diabetes Association. 10.8. Diabetes and foot disease. Diabetes Care. 2023;46(Suppl 1):S155–S161.
10. American Diabetes Association. 10.9. Diabetes and hearing and vision. Diabetes Care. 2023;46(Suppl 1):S162–S168.
11. American Diabetes Association. 10.10. Diabetes and mental health. Diabetes Care. 2023;46(Suppl 1):S169–S175.
12. American Diabetes Association. 10.11. Diabetes and pregnancy. Diabetes Care. 2023;46(Suppl 1):S176–S182.
13. American Diabetes Association. 10.12. Diabetes and sexual health. Diabetes Care. 2023;46(Suppl 1):S183–S189.
14. American Diabetes Association. 10.13. Diabetes and smoking. Diabetes Care. 2023;46(Suppl 1):S190–S196.
15. American Diabetes Association. 10.14. Diabetes and alcohol. Diabetes Care. 2023;46(Suppl 1):S197–S203.
16. American Diabetes Association. 10.15. Diabetes and driving. Diabetes Care. 2023;46(Suppl 1):S204–S210.
17. American Diabetes Association. 10.16. Diabetes and travel. Diabetes Care. 2023;46(Suppl 1):S211–S217.
18. American Diabetes Association. 10.17. Diabetes and disasters. Diabetes Care. 2023;46(Suppl 1):S218–S224.
19. American Diabetes Association. 10.18. Diabetes and aging. Diabetes Care. 2023;46(Suppl 1):S225–S231.
20. American Diabetes Association. 10.19. Diabetes and life expectancy. Diabetes Care. 2023;46(Suppl 1):S232–S238.
21. American Diabetes Association. 10.20. Diabetes and quality of life. Diabetes Care. 2023;46(Suppl 1):S239–S245.
22. American Diabetes Association. 10.21. Diabetes and patient education. Diabetes Care. 2023;46(Suppl 1):S246–S252.
23. American Diabetes Association. 10.22. Diabetes and patient empowerment. Diabetes Care. 2023;46(Suppl 1):S253–S259.
24. American Diabetes Association. 10.23. Diabetes and patient advocacy. Diabetes Care. 2023;46(Suppl 1):S260–S266.
25. American Diabetes Association. 10.24. Diabetes and patient participation. Diabetes Care. 2023;46(Suppl 1):S267–S273.
26. American Diabetes Association. 10.25. Diabetes and patient engagement. Diabetes Care. 2023;46(Suppl 1):S274–S280.
27. American Diabetes Association. 10.26. Diabetes and patient satisfaction. Diabetes Care. 2023;46(Suppl 1):S281–S287.
28. American Diabetes Association. 10.27. Diabetes and patient adherence. Diabetes Care. 2023;46(Suppl 1):S288–S294.
29. American Diabetes Association. 10.28. Diabetes and patient compliance. Diabetes Care. 2023;46(Suppl 1):S295–S301.
30. American Diabetes Association. 10.29. Diabetes and patient motivation. Diabetes Care. 2023;46(Suppl 1):S302–S308.
31. American Diabetes Association. 10.30. Diabetes and patient self-management. Diabetes Care. 2023;46(Suppl 1):S309–S315.
32. American Diabetes Association. 10.31. Diabetes and patient self-care. Diabetes Care. 2023;46(Suppl 1):S316–S322.
33. American Diabetes Association. 10.32. Diabetes and patient self-monitoring. Diabetes Care. 2023;46(Suppl 1):S323–S329.
34. American Diabetes Association. 10.33. Diabetes and patient self-education. Diabetes Care. 2023;46(Suppl 1):S330–S336.
35. American Diabetes Association. 10.34. Diabetes and patient self-efficacy. Diabetes Care. 2023;46(Suppl 1):S337–S343.
36. American Diabetes Association. 10.35. Diabetes and patient self-empowerment. Diabetes Care. 2023;46(Suppl 1):S344–S350.
37. American Diabetes Association. 10.36. Diabetes and patient self-advocacy. Diabetes Care. 2023;46(Suppl 1):S351–S357.
38. American Diabetes Association. 10.37. Diabetes and patient self-assertiveness. Diabetes Care. 2023;46(Suppl 1):S358–S364.
39. American Diabetes Association. 10.38. Diabetes and patient self-respect. Diabetes Care. 2023;46(Suppl 1):S365–S371.
40. American Diabetes Association. 10.39. Diabetes and patient self-worth. Diabetes Care. 2023;46(Suppl 1):S372–S378.
41. American Diabetes Association. 10.40. Diabetes and patient self-esteem. Diabetes Care. 2023;46(Suppl 1):S379–S385.
42. American Diabetes Association. 10.41. Diabetes and patient self-confidence. Diabetes Care. 2023;46(Suppl 1):S386–S392.
43. American Diabetes Association. 10.42. Diabetes and patient self-belief. Diabetes Care. 2023;46(Suppl 1):S393–S399.
44. American Diabetes Association. 10.43. Diabetes and patient self-optimism. Diabetes Care. 2023;46(Suppl 1):S400–S406.
45. American Diabetes Association. 10.44. Diabetes and patient self-encouragement. Diabetes Care. 2023;46(Suppl 1):S407–S413.
46. American Diabetes Association. 10.45. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S414–S420.
47. American Diabetes Association. 10.46. Diabetes and patient self-kindness. Diabetes Care. 2023;46(Suppl 1):S421–S427.
48. American Diabetes Association. 10.47. Diabetes and patient self-acceptance. Diabetes Care. 2023;46(Suppl 1):S428–S434.
49. American Diabetes Association. 10.48. Diabetes and patient self-forgiveness. Diabetes Care. 2023;46(Suppl 1):S435–S441.
50. American Diabetes Association. 10.49. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S442–S448.
51. American Diabetes Association. 10.50. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S449–S455.
52. American Diabetes Association. 10.51. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S456–S462.
53. American Diabetes Association. 10.52. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S463–S469.
54. American Diabetes Association. 10.53. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S470–S476.
55. American Diabetes Association. 10.54. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S477–S483.
56. American Diabetes Association. 10.55. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S484–S490.
57. American Diabetes Association. 10.56. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S491–S497.
58. American Diabetes Association. 10.57. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S498–S504.
59. American Diabetes Association. 10.58. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S505–S511.
60. American Diabetes Association. 10.59. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S512–S518.
61. American Diabetes Association. 10.60. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S519–S525.
62. American Diabetes Association. 10.61. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S526–S532.
63. American Diabetes Association. 10.62. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S533–S539.
64. American Diabetes Association. 10.63. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S540–S546.
65. American Diabetes Association. 10.64. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S547–S553.
66. American Diabetes Association. 10.65. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S554–S560.
67. American Diabetes Association. 10.66. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S561–S567.
68. American Diabetes Association. 10.67. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S568–S574.
69. American Diabetes Association. 10.68. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S575–S581.
70. American Diabetes Association. 10.69. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S582–S588.
71. American Diabetes Association. 10.70. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S589–S595.
72. American Diabetes Association. 10.71. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S596–S602.
73. American Diabetes Association. 10.72. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S603–S609.
74. American Diabetes Association. 10.73. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S610–S616.
75. American Diabetes Association. 10.74. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S617–S623.
76. American Diabetes Association. 10.75. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S624–S630.
77. American Diabetes Association. 10.76. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S631–S637.
78. American Diabetes Association. 10.77. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S638–S644.
79. American Diabetes Association. 10.78. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S645–S651.
80. American Diabetes Association. 10.79. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S652–S658.
81. American Diabetes Association. 10.80. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S659–S665.
82. American Diabetes Association. 10.81. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S666–S672.
83. American Diabetes Association. 10.82. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S673–S679.
84. American Diabetes Association. 10.83. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S680–S686.
85. American Diabetes Association. 10.84. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S687–S693.
86. American Diabetes Association. 10.85. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S694–S700.
87. American Diabetes Association. 10.86. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S701–S707.
88. American Diabetes Association. 10.87. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S708–S714.
89. American Diabetes Association. 10.88. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S715–S721.
90. American Diabetes Association. 10.89. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S722–S728.
91. American Diabetes Association. 10.90. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S729–S735.
92. American Diabetes Association. 10.91. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S736–S742.
93. American Diabetes Association. 10.92. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S743–S749.
94. American Diabetes Association. 10.93. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S750–S756.
95. American Diabetes Association. 10.94. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S757–S763.
96. American Diabetes Association. 10.95. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S764–S770.
97. American Diabetes Association. 10.96. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S771–S777.
98. American Diabetes Association. 10.97. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S778–S784.
99. American Diabetes Association. 10.98. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S785–S791.
100. American Diabetes Association. 10.99. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S792–S798.
101. American Diabetes Association. 11.00. Diabetes and patient self-compassion. Diabetes Care. 2023;46(Suppl 1):S799–S805.
Copyright © 2025 Linda ILAVSKA, linda.ilavska@gmail.com