

Literatura ACTA MEDICINAE 14/2025 Vnitřní lékařství

- 2 **Současné možnosti léčby kardiorenálního metabolického syndromu, event. výhledy**
prof. MUDr. Hana Rosolová, DrSc. Centrum preventivní kardiologie, 2. interní klinika, LF UK a FN Plzeň
- 2 **Hypertenze a chronická obstrukční plicní nemoc**
prof. MUDr. Miroslav Souček, CSc. | doc. MUDr. Mojmír Blaha, CSc. II. interní klinika, LF MU a FN u sv. Anny v Brně
- 2 **Dapagliflozin – integrální součást terapie chronického onemocnění ledvin v éře kardio-renálně-metabolického přístupu**
MUDr. Jan Vachek, MHA Klinika nefrologie, 1. LF UK a VFN Praha; Interní oddělení, Klatovská nemocnice, a. s.
MUDr. Kateřina Oulehle, MBA Interní oddělení, Klatovská nemocnice, a. s.
prof. MUDr. Vladimír Tesař, DrSc., MBA Klinika nefrologie, VFN Praha
- 2 **Zahájení léčby Syntroxinem u čerstvě gravidní pacientky – kazuistika**
MUDr. Libuše Schreibová Endokrinologie - EUC Klinika České Budějovice
- 3 **Novinky v léčbě vaskulitid: přehled současných terapeutických možností**
doc. MUDr. Radim Bečvář, CSc. Revmatologický ústav, Praha
- 3 **Jak praktičtí lékaři přispívají k diagnostice a léčbě ischemické choroby dolních končetin**
doc. MUDr. Bohumil Seifert, Ph.D. | MUDr. Jana Vojtíšková Ústav všeobecného lékařství, 1. LF UK, Praha
- 3 **Role esenciálních fosfolipidů u pacientů s MASLD: studie EXCEL**
doc. MUDr. Jiří Slíva, Ph.D., MBA Ústav farmakologie, 3. LF UK, Praha
- 3 **Moderní léčba idiopatických střevních zánětů**
MUDr. Matúš Hladík II. interní klinika – gastroenterologická a geriatrická, LF UP a FN Olomouc
- 4 **Současné možnosti léčby refluxní choroby jícnu**
MUDr. Tomáš Skutil | MUDr. Lucie Hajnová Interní gastroenterologická klinika, LF MU a FN Brno
- 4 **Spasmolytika v terapii abdominální bolesti**
MUDr. Jan Miroslav Hartinger Farmakologický ústav, 1. LF UK a VFN Praha
- 5 **Novinky v léčbě dyslipidemií aneb ozvěny aktualizovaných doporučení**
MUDr. Martin Šatný, Ph.D. Centrum preventivní kardiologie, III. interní klinika – klinika endokrinologie a metabolismu, 1. LF UK a VFN Praha
- 5 **Obezita a syndrom spánková apnoe**
MUDr. Lujza Zikmund Galková I. interní kardiologická klinika, FN u sv. Anny v Brně; Klinika tělovýchovného lékařství a rehabilitace, FN u sv. Anny v Brně; Mezinárodní centrum klinického výzkumu (ICRC), FN u sv. Anny v Brně, LF MU
- 5 **Benefity nad rámec hubnutí – co umějí nová antiobezitika**
MUDr. Dita Pichlerová, Ph.D. Centrum léčby obezity, Interní klinika, 2. LF UK a FN Motol, Praha
- 6 **Současné možnosti léčby infekce HIV**
doc. MUDr. Hanuš Rozsypal, CSc. Klinika infekčních a tropických nemocí, 1. LF UK a FN Bulovka, Praha
- 6 **Trendy současné vakcinace**
prof. MUDr. Roman Prymula, CSc., Ph.D. Ústav preventivního lékařství, LF UK Hradec Králové
- 7 **Důležitost očkování proti chřipce u pacientů s kardiovaskulárním onemocněním**
MUDr. Petra Vysočanová Interní kardiologická klinika, LF MU a FN Brno
- 7 **Sideropenická anemie a anemie chronických chorob – nejběžnější typy anemií**
MUDr. Eva Havlová Ústav klinické biochemie a hematologie, FN a LF UK, Plzeň
- 7 **Diferenciální diagnostika bolesti zad**
MUDr. Luděk Ryba, Ph.D. | MUDr. Michael Lujc Klinika ortopedie a spondylochirurgie, FN Brno, LF MU Brno
Ph.Dr. Iva Marková, Ph.D. Fakulta zdravotnických studií, Univerzita Pardubice
- 7 **Moderní přístupy k léčbě osteoporózy; současné možnosti farmakologické léčby**
MUDr. Zdeněk Fojtík, Ph.D., Diagnosticko-terapeutické centrum, revmatologická ambulance, FN Brno a LF MU, Brno

Současné možnosti léčby kardiorenálního metabolického syndromu, event. výhledy

prof. MUDr. Hana Rosolová, DrSc. Centrum preventivní kardiologie, 2. interní klinika, LF UK a FN Plzeň

- 1 Ndumele, C. E., et al.: A synopsis of the evidence for the science and clinical management of cardiovascular-kidney-metabolic (CKM) syndrome: a scientific statement from the American Heart Association. *Circulation*, 2023, 148, s. 1636–1666.
- 2 Romeo, S. – Vidal Puig, A. – Husain, M., et al.: Clinical staging to guide management of metabolic disorders and their sequelae: an European Atherosclerosis Society consensus statement. *Eur Heart J*, 2025, ehaf314, doi: 10.1093/eurheartj/ehaf314.
- 3 Barzilay, J. I. – Farag, Y. M. K. – Durthaler, J.: Albuminuria: an underappreciated risk factor for cardiovascular disease. *J Am Heart Assoc*, 2024, 13, e030131.
- 4 Mancía, G. – Kreutz, R. – Brunström, M., et al.: 2023 ESH Guidelines for the management of arterial hypertension. The Task Force for the Management of Arterial Hypertension of the European Society of Hypertension: endorsed by the International Society of Hypertension (ISH) and the European Renal Association (ERA). *J Hypertens*, 2023, 41, s. 1874–2071.
- 5 McEvoy, J. W. – McCarthy, C. P. – Bruno, R. M., et al.: 2024 ESC Guidelines for the management of elevated blood pressure and hypertension. *Eur Heart J*, 2024, 45, s. 3912–4018.
- 6 Widimský, J. – Filipovský, J. – Ceral, J., et al.: Diagnostické a léčebné postupy u arteriální hypertenze. Doporučení České společnosti pro hypertenzi 2022. *Hypertenze a kardiovaskulární prevence*, 2022, 2, s. 1–27.
- 7 González-Juanatey, J. R. – Górriz, J. L. – Ortiz, A., et al.: Cardiorenal benefits of finerenone: protecting kidney and heart. *Ann Med*, 2023, 55, s. 502–513.
- 8 McDonagh, T. A. – Metra, M. – Adamo, M., et al.: 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure. *Eur Heart J*, 2021, 42, s. 3599–3726.
- 9 Kristensen, S. L. – Rorth, R. – Jhund, P. S., et al.: Cardiovascular mortality and kidney outcomes with GLP-1 receptor agonists in patients with type 2 diabetes: a systematic review and meta-analysis of cardiovascular outcome trials. *Lancet Diabetes Endocrinol*, 2019, 7, s. 776–785.
- 10 Visseren, F. L. J. – Mach, F. – Smulders, Y. M., et al.: 2021 ESC Guidelines on cardiovascular disease prevention in clinical practice. *Eur Heart J*, 2021, doi: 10.1093/eurheartj/ehab484.
- 11 Preiss, D. – Logue, J. – Sammons, E., et al.: Effect of fenofibrate on progression of diabetic retinopathy. *NEJM Evid*, 2024, 3, Evid oa2400179.

Hypertenze a chronická obstrukční plicní nemoc

prof. MUDr. Miroslav Souček, CSc. | doc. MUDr. Mojmir Blaha, CSc. II. interní klinika, LF MU a FN u sv. Anny v Brně

- 1 Finks, S. W. – Rumbak, M. J. – Self, T. H.: Treating hypertension in chronic obstructive pulmonary disease. *N Engl J Med*, 2020, 382, s. 353–363.
- 2 Liang, X. – Chou, O. – Cheung, B., et al.: Association between systemic arterial hypertension and chronic pulmonary disease: Results from the USA National Health and Nutrition Examination Survey 1999–2018: A Cross-sectional Study. *Chronic Obstr Pulm Dis*, 2023, 10, s. 190–198, doi: 10.15326/jcopdf.2022.0306.
- 3 Widimský, J. – Filipovský, J. – Ceral, J., et al.: Diagnostické a léčebné postupy u arteriální hypertenze – verze 2022. Doporučení České společnosti pro hypertenzi. *Hypertenze Kardiovaskulární prevence*, 2022, suppl., s. 25.
- 4 Mancía, G. – Kreutz, R. – Brunström, M., et al.: 2023 ESH Guidelines for the management of arterial hypertension. The Task Force for the management of arterial hypertension of the European Society of Hypertension. Endorsed by the International Society of Hypertension (ISH) and European Renal Association (ERA). *J Hypertens*, 2023, 41, s. 1874–2071.
- 5 Yang, Y. L. – Xiang, Z. J. – Yang, J. H., et al.: Association of beta-blocker use with survival and pulmonary function in patients with chronic obstructive pulmonary and cardiovascular disease: Systematic review and meta-analysis. *Eur Heart J*, 2020, 41, s. 4415–4422.

Dapagliflozin – integrální součást terapie chronického onemocnění ledvin v éře kardio-renálně-metabolického přístupu

MUDr. Jan Vachek, MHA Klinika nefrologie, 1. LF UK a VFN Praha; Interní oddělení, Klatovská nemocnice, a. s.

MUDr. Kateřina Oulehle, MBA Interní oddělení, Klatovská nemocnice, a. s.

prof. MUDr. Vladimír Tesař, DrSc., MBA Klinika nefrologie, VFN Praha

- 1 Sebastian, S. A. – Padda, I. – Johal, G.: Cardiovascular-kidney-metabolic (CKM) syndrome: A state-of-the-art review. *Curr Probl Cardiol*, 2024, 49, 102344, doi: 10.1016/j.cpcardiol.2023.102344.
- 2 Ndumele, C. E. – Neeland, I. J. – Tuttle, K. R., et al.: A synopsis of the evidence for the science and clinical management of cardiovascular-kidney-metabolic (CKM) syndrome: A scientific statement from the American Heart Association. *Circulation*, 2023, 148, s. 1636–1664, doi: 10.1161/CIR.0000000000001186.
- 3 Levey, A. S.: Defining AKD: the spectrum of AKI, AKD, and CKD. *Nephron*, 2022, 146, s. 302–305, doi: 10.1159/000516647.
- 4 Ronco, C. – Haapio, M. – House, A. A., et al.: Cardiorenal syndrome. *J Am Coll Cardiol*, 2008, 52, s. 1527–1539, doi: 10.1016/j.jacc.2008.07.051.
- 5 Romagnani, P. – Agarwal, R. – Chan, J. C. N., et al.: Chronic kidney disease. *Nat Rev Dis Primers*, 2025, 11, s. 8, doi: 10.1038/s41572-024-00589-9.
- 6 Lewis, E. J. – Hunsicker, L. G. – Bain, R. P., et al.: The Collaborative Study Group: The effect of angiotensin-converting-enzyme inhibition on diabetic nephropathy. *N Engl J Med*, 1993, 329, s. 1456–1462, doi: 10.1056/NEJM19931113292004.
- 7 Thorp, M. L.: Diabetic nephropathy: common questions. *Am Fam Physician*, 2005, 72, s. 96–99.
- 8 ONTARGET Investigators; Yusuf, S. – Teo, K. K. – Pogue, J., et al.: Telmisartan, ramipril, or both in patients at high risk for vascular events. *N Engl J Med*, 2008, 358, s. 1547–1559, doi: 10.1056/NEJMoa0801317.
- 9 Rizos, E. C. – Agouridis, A. P. – Elisaf, M. S.: Aliskiren in patients with diabetes: a systematic review. *Curr Vasc Pharmacol*, 2012, 10, s. 140–146, doi: 10.2174/157016112799305094.
- 10 Zinman, B. – Wanner, C. – Lachin, J. M., et al.: EMPA-REG OUTCOME Investigators: Empagliflozin, cardiovascular outcomes, and mortality in type 2 diabetes. *N Engl J Med*, 2015, 373, s. 2117–2128, doi: 10.1056/NEJMoa1504720.
- 11 Chen, A. X. – Fletcher, R. – Neuen, B. L., et al.: An overview of the CANVAS Program and CREDENCE trial: The primary outcomes and key clinical implications for those managing patients with type 2 diabetes. *Diabetes Obes Metab*, 2024, 26, suppl. 5, s. 5–13, doi: 10.1111/dom.15751.
- 12 Heerspink, H. J. L. – Stefánsson, B. V. – Correa-Rotter, R., et al.: DAPA-CKD Trial Committees and Investigators: Dapagliflozin in patients with chronic kidney disease. *N Engl J Med*, 2020, 383, s. 1436–1446, doi: 10.1056/NEJMoa2024816.
- 13 The EMPA-KIDNEY Collaborative Group; Herrington, W. G. – Staplin, N. – Wanner, C., et al.: Empagliflozin in patients with chronic kidney disease. *N Engl J Med*, 2023, 388, s. 117–127, doi: 10.1056/NEJMoa2204233.
- 14 Yariyebeyi, H. – Atkin, S. L. – Sahebkar, A.: Mechanistic effects of SGLT2 inhibition on blood pressure in diabetes. *Diabetes Metab Syndr*, 2019, 13, s. 1679–1683, doi: 10.1016/j.dsx.2019.03.031.
- 15 Agarwal, R. – Filipatos, G. – Pitt, B., et al.: FIDELIO-DKD and FIDELIO-DKD investigators: Cardiovascular and kidney outcomes with finerenone in patients with type 2 diabetes and chronic kidney disease: the FIDELITY pooled analysis. *Eur Heart J*, 2022, 43, s. 474–484, doi: 10.1093/eurheartj/ehab777.
- 16 Mann, J. F. E. – Rossing, P. – Bakris, G., et al.: Effects of semaglutide with and without concomitant SGLT2 inhibitor use in participants with type 2 diabetes and chronic kidney disease in the FLOW trial. *Nat Med*, 2024, 30, s. 2849–2856, doi: 10.1038/s41591-024-03133-0.
- 17 Gupta, S. – Dominguez, M. – Golestaneh, L.: Diabetic kidney disease: an update. *Med Clin North Am*, 2023, 107, s. 689–705, doi: 10.1016/j.mcna.2023.03.004.
- 18 Neuen, B. L. – Young, T. – Heerspink, H. J. L., et al.: SGLT2 inhibitors for the prevention of kidney failure in patients with type 2 diabetes: a systematic review and meta-analysis. *Lancet Diabetes Endocrinol*, 2019, 7, s. 845–854, doi: 10.1016/S2213-8587(19)30256-6.
- 19 Nassif, M. E. – Windsor, S. L. – Borlaug, B. A., et al.: The SGLT2 inhibitor dapagliflozin in heart failure with preserved ejection fraction: a multicenter randomized trial. *Nat Med*, 2021, 27, s. 1954–1960, doi: 10.1038/s41591-021-01536-x.
- 20 Gao, M. – Bhatia, K. – Kapoor, A., et al.: SGLT2 inhibitors, functional capacity, and quality of life in patients with heart failure: a systematic review and meta-analysis. *JAMA Netw Open*, 2024, 7, e245135, doi: 10.1001/jamanetworkopen.2024.5135.
- 21 Mariani, M. V. – Manzi, G. – Pierucci, N., et al.: SGLT2i effect on atrial fibrillation: A network meta-analysis of randomized controlled trials. *J Cardiovasc Electrophysiol*, 2024, 35, s. 1754–1765, doi: 10.1111/jce.16344.
- 22 Ndumele, C. E. – Rangaswami, J. – Chow, S. L., et al.: American Heart Association. Cardiovascular-kidney-metabolic health: a presidential advisory from the American Heart Association. *Circulation*, 2023, 148, s. 1606–1635, doi: 10.1161/CIR.0000000000001184. Erratum in: *Circulation*, 2024, 149, e1023, doi: 10.1161/CIR.0000000000001241.
- 23 Jankowski, J. – Floege, J. – Fliser, D., et al.: Cardiovascular disease in chronic kidney disease: pathophysiological insights and therapeutic options. *Circulation*, 2021, 143, s. 1157–1172, doi: 10.1161/CIRCULATIONAHA.120.050686.

Zahájení léčby Syntroxinem u čerstvě gravidní pacientky – kazuistika

MUDr. Libuše Schreibová Endokrinologie - EUC Klinika České Budějovice

- 1 Hána, V. *Endokrinologie pro praxi*. Praha, Maxdorf, 2019.
- 2 Suchopár, J. – Prokeš, M.: Levotyroxin – originály, generika a jejich zaměnitelnost. *DMEV*, 2020, 3.

Novinky v léčbě vaskulitid: přehled současných terapeutických možností

doc. MUDr. Radim Bečvář, CSc. Revmatologický ústav, Praha

- 1 Fessler, B. J.: Approach to the diagnosis of vasculitis in adult patients. In: Ball, G. V. – Louis Bridge, S. Jr., eds.: *Vasculitis*. Oxford, Oxford University Press, 2008, s. 277–284.
- 2 Seeliger, B. – Förster, M. – Happe, J., et al.: Interferon- α for induction and maintenance of remission in eosinophilic granulomatosis with polyangiitis: A single-center retrospective observational cohort study. *J Rheumatol*, 2017, 44, s. 806–814.
- 3 Shimizu, T. – Morita, T. – Kumanogoh, A.: The therapeutic efficacy of intravenous immunoglobulin in anti-neutrophilic cytoplasmic antibody-associated vasculitis: a meta-analysis. *Rheumatology*, 2020, 59, s. 959–967.
- 4 Walsh, M. – Collister, D. – Zeng, L., et al.: Plasma exchange and glucocorticoid dosing for patients with ANCA-associated vasculitis. *BMJ*, 2022, 25, s. 376.
- 5 Hellmich, B. – Sanchez-Alamo, B. – Schirmer, J. H., et al.: EULAR recommendations for the management of ANCA-associated vasculitis: 2022 update. *Ann Rheum Dis*, 2024, 83, s. 30–47.
- 6 Mohammad, A. J. – Hot, A. – Arndt, F., et al.: Rituximab for the treatment of eosinophilic granulomatosis with polyangiitis (Churg-Strauss). *Ann Rheum Dis*, 2016, 75, s. 396–401.
- 7 Hellmich, B. – Agueda, A. – Monti, S., et al.: 2018 Update of the EULAR recommendations for the management of large vessel vasculitis. *Ann Rheum Dis*, 2020, 79, s. 19–30.
- 8 Jayne, D. R. W. – Merkel, P. A. – Schall, T. J., et al.: ADVOCATE Study Group: Avacopan for the treatment of ANCA-associated vasculitis. *N Engl J Med*, 2021, 384, s. 599–609.
- 9 Alhosseini, C. – Kopelman, H. – Zaino, M., et al.: Avacopan for the treatment of anti-neutrophil cytoplasmic antibody (ANCA)-associated vasculitis. *Ann Pharmacother*, 2023, 57, s. 1449–1454.
- 10 Amudala, N. A. – Boukhalal, S. – Sheridan, B., et al.: Obinutuzumab as treatment for ANCA-associated vasculitis. *Rheumatology*, 2022, 61, s. 3814–3817.
- 11 Wechsler, M. E. – Akuthota, P. – Jayne, D., et al.: Mepolizumab or placebo for eosinophilic granulomatosis with polyangiitis. *N Engl J Med*, 2017, 376, s. 1921–1932.
- 12 Wechsler, M. E. – Nair, P. – Terrier, B., et al.: MANDARA Study Group: Benralizumab versus mepolizumab for eosinophilic granulomatosis with polyangiitis. *N Engl J Med*, 2024, 390, s. 911–921.
- 13 Molina, B. – Padoan, R. – Urban, M. L., et al.: Dupilumab for relapsing or refractory sinonasal and/or asthma manifestations in eosinophilic granulomatosis with polyangiitis: A European retrospective study. *Ann Rheum Dis*, 2023, 82, s. 1587–1593.
- 14 Nanzer, A. M. – Gates, J. – Haris, F., et al.: Tezepelumab in patients with eosinophilic granulomatosis with polyangiitis (EGPA) following suboptimal response to anti-IL5/5R therapy. *Chest*, 2025, 21, S0012-3692(25)00650-656.
- 15 Conway, R. – O'Neill, L. – Gallagher, P., et al.: Ustekinumab for refractory giant cell arteritis: A prospective 52-week trial. *Semin Arthritis Rheum*, 2018, 48, s. 523–528.
- 16 Loricera, J. – Tofade, T. – Prieto-Peña, D.: Effectiveness of Janus kinase inhibitors in relapsing giant cell arteritis in real-world clinical practice and review of the literature. *Arthritis Res Ther*, 2024, 26, s. 116.
- 17 Van der Houwen, T. B. – Van Hagen, P. M. – Van Laar, J. A. M.: Immunopathogenesis of Behçet's disease and treatment modalities. *Semin Arthritis Rheum*, 2022, 52, 151956.
- 18 Fabiani, C. – Vitale, A. – Rigante, D., et al.: The presence of uveitis is associated with a sustained response to the interleukin (IL)-1 inhibitors anakinra and canakinumab in Behçet's disease. *Ocul Immunol Inflamm*, 2020, 28, s. 298–304.
- 19 Tugal-Tutkun, I. – Pavesio, C. – De Cordoue, A., et al.: Use of gevokizumab in patients with Behçet's disease uveitis: An international, randomized, double-masked, placebo-controlled study and open-label extension study. *Ocul Immunol Inflamm*, 2018, 26, s. 1023–1033.

Jak praktičtí lékaři přispívají k diagnostice a léčbě ischemické choroby dolních končetin

doc. MUDr. Bohumil Seifert, Ph.D. | MUDr. Jana Vojtíšková Ústav všeobecného lékařství, 1. LF UK, Praha

- 1 Frank, U. – Nikol, S. – Belch, J., et al.: ESMV Guideline on peripheral arterial disease. *Vasa*, 2019, 48, suppl. 102, s. 1–79.
- 2 Amrock, S. M. – Abraham, C. Z. – Jung, E., et al.: Risk factors for mortality among individuals with peripheral arterial disease. *Am J Cardiol*, 2017, 120, s. 862–867.
- 3 Karetová, D. – Vojtíšková, J. – Roztočil, K. – Seifert, B.: Ischemická choroba dolních končetin. Doporučený postup pro všeobecné praktické lékaře. SVL ČLS JEP. 2022. S. 1–16. Dostupné z: <https://www.svl.cz/svl-docs/doporucene-postupy/29/>
- 4 Dachun, X. – Jue, L. – Liling, Z., et al.: Sensitivity and specificity of the ankle-brachial index to diagnose peripheral artery disease: a structured review. *Vasc Med*, 2010, 15, s. 361–369.
- 5 Davies, J. H. – Richards, J. – Conway, K., et al.: Primary care screening for peripheral arterial disease: a cross-sectional observational study. *Br J Gen Pract*, 2017, 67, s. e103–e110.
- 6 Mays, R. J. – Rogers, R. K. – Hiatt, W. R., et al.: Community walking programs for treatment of peripheral artery disease. *J Vasc Surg*, 2013, 58, s. 1678–1687.
- 7 Bevan, G. H. – White Solaru, K. T.: Evidence-based medical management of peripheral artery disease. *Arterioscler Thromb Vasc Biol*, 2020, 40, s. 541–553.
- 8 Bonaca, M. P. – Bauersachs, R. M. – Anand, S. S., et al.: Rivaroxaban in peripheral artery disease after revascularization. *N Engl J Med*, 2020, 382, s. 1994–2004.

Role esenciálních fosfolipidů u pacientů s MASLD: studie EXCEL

doc. MUDr. Jiří Slíva, Ph.D., MBA Ústav farmakologie, 3. LF UK, Praha

- 1 Riazi, K. – Azhari, H. – Charette, J. H., et al.: The prevalence and incidence of NAFLD worldwide: a systematic review and meta-analysis. *Lancet Gastroenterol Hepatol*, 2022, 7, s. 851–861.
- 2 Younossi, Z. M. – Golabi, P. – Paik, J. M., et al.: The global epidemiology of nonalcoholic fatty liver disease (NAFLD) and nonalcoholic steatohepatitis (NASH): a systematic review. *Hepatology*, 2023, 77, s. 1335–1347.
- 3 Stefaň, N. – Cusi, K.: A global view of the interplay between non-alcoholic fatty liver disease and diabetes. *Lancet Diabetes Endocrinol*, 2022, 10, s. 284–296.
- 4 Friedman, S. L. – Neuschwander-Tetri, B. A. – Rinella, M., et al.: Mechanisms of NAFLD development and therapeutic strategies. *Nat Med*, 2018, 24, s. 908–922.
- 5 Golabi, P. – Paik, J. M. – Kumar, A., et al.: Nonalcoholic fatty liver disease (NAFLD) and associated mortality in individuals with type 2 diabetes, pre-diabetes, metabolically unhealthy, and metabolically healthy individuals in the United States. *Metabolism*, 2023, 146, 155642.
- 6 New MASLD Nomenclature. AASLD. Dostupné z: <https://www.aasld.org/new-masld-nomenclature>, vyhledáno 17. 7. 2025.
- 7 Zeng, K. Y. – Bao, W. Y. – Wang, Y. H., et al.: Non-invasive evaluation of liver steatosis with imaging modalities: New techniques and applications. *World J Gastroenterol*, 2023, 29, s. 2534–2550.
- 8 Puri, P. – Baillie, R. A. – Wiest, M. M., et al.: A lipidomic analysis of nonalcoholic fatty liver disease. *Hepatology*, 2007, 46, s. 1081–1090.
- 9 Ooi, G. J. – Meikle, P. J. – Huynh, K., et al.: Hepatic lipidomic remodeling in severe obesity manifests with steatosis and does not evolve with non-alcoholic steatohepatitis. *J Hepatol*, 2021, 75, s. 524–535.
- 10 Gundermann, K. J. – Kuenker, A. – Kuntz, E., et al.: Activity of essential phospholipids (EPL) from soybean in liver diseases. *Pharmacol Rep*, 2011, 63, s. 643–659.
- 11 Gundermann, K. J. – Gundermann, S. – Drozdik, M., et al.: Essential phospholipids in fatty liver: a scientific update. *Clin Exp Gastroenterol*, 2016, 9, s. 105–117.
- 12 Dajani, A. I. – Abuhammour, A.: Agents for the treatment of fatty liver disease: focus on essential phospholipids. *Drugs Ther Perspect*, 2021, 37, s. 249–264.
- 13 Varganova, D. L. – Pavlov, C. S. – Casazza, G., et al.: Essential phospholipids for people with non-alcoholic fatty liver disease. *Cochrane Database Syst Rev*, 2019, 2019, CD013301.
- 14 Maev, I. V. – Samsonov, A. A. – Palgova, L. K., et al.: Effectiveness of phosphatidylcholine in alleviating steatosis in patients with non-alcoholic fatty liver disease and cardiometabolic comorbidities (MAN-POWER study). *BMJ Open Gastroenterol*, 2020, 7, e000341.
- 15 Dajani, A. I. – Abu Hammour, A. M. – Zakaria, M. A., et al.: Essential phospholipids as a supportive adjunct in the management of patients with NAFLD. *Arab J Gastroenterol*, 2015, 16, s. 99–104.
- 16 Stefan, N. – Hartleb, M. – Popovic, B., et al.: Effect of essential phospholipids on hepatic steatosis in metabolic dysfunction-associated steatotic liver disease associated with type 2 diabetes mellitus and/or hyperlipidemia and/or obesity: study protocol of a randomized, double-blind, phase IV clinical trial. *Trials*, 2024, 25, 374.
- 17 Stefan, N., et al.: Abstrakt/poster prezentován na: AASLD; 15.–19. 11. 2024; San Diego, CA, USA, poster – ID: 5037.

Moderní léčba idiopatických střevních zánětů

MUDr. Matúš Hladík II. interní klinika – gastroenterologická a geriatrická, LF UP a FN Olomouc

- 1 Zavoral, M. (ed.): *Mařatková gastroenterologie. Svazek 1, Patofyziologie, diagnostika, léčba*. Praha, Karolinum, 2021, s. 649–658.
- 2 Lukáš, M., et al.: *Idiopatické střevní záněty: nové trendy a mezioborové souvislosti*. Praha, Grada, 2020.
- 3 Bortlík, M. – Duricová, D. – Douda, T. – Konečný, M., et al.: Guidelines for the administration of biological therapy in patients with inflammatory bowel diseases: fourth, updated edition. *Gastroenterologie a hepatologie*, 2019, 73, s. 11–24, doi: 10.14735/amgh201911.
- 4 Schmidt, M. – Gleditsch, K.: Manufacturing of biopharmaceuticals. *Pharmaceutical Biotechnology*, 2019, s. 45–67.
- 5 Ward, D. – Nyboe Andersen, N. – Gortz, S., et al.: Tumor necrosis factor inhibitors in inflammatory bowel disease and risk of immune mediated inflammatory diseases. *Clinical Gastroenterology and Hepatology*, 2023, 22, s. 135–143.e8, doi: 10.1016/j.cgh.2023.06.025.
- 6 Gordon, H. – Minozzi, S. – Kopylov, U., et al.: ECCO Guidelines on therapeutics in Crohn's disease: medical treatment. *Journal of Crohn's and Colitis*, 2024, 18, s. 1531–1555, doi: 10.1093/ecco-jcc/jjae091.
- 7 Raine, T. – Bonovas, S. – Burisich, J., et al.: ECCO guidelines on therapeutics in ulcerative colitis: medical treatment. *Journal of Crohn's and Colitis*, 2021, 16, s. 2–17, doi: 10.1093/ecco-jcc/jj1b178.
- 8 Choy, M. C. – Li Wai Suen, C. F. D. – Con, D., et al.: Intensified versus standard dose infliximab induction therapy for steroid-refractory acute severe ulcerative colitis (PREDICT-UC): an open-label, multicentre, randomised controlled trial. *The Lancet Gastroenterology & Hepatology*, 2024, 9, s. 981–996, doi: 10.1016/s2468-1253(24)00200-0.
- 9 Buisson, A. – Nachury, M. – Reymond, M. – Yzet, C., et al.: Effectiveness of switching from intravenous to subcutaneous infliximab in patients with inflammatory bowel diseases: the REMSWITCH study. *Clinical Gastroenterology and Hepatology*, 2023, 21, s. 2338–2346.e3, doi: 10.1016/j.cgh.2022.08.011.
- 10 Hanauer, S. B. – Sands, B. E. – Schreiber, S., et al.: Subcutaneous infliximab (CT-P13 SC) as maintenance therapy for inflammatory bowel disease: two randomized phase 3 trials (LIBERTY). *Gastroenterology*, 2024, 167, s. 919–933, doi: 10.1053/j.gastro.2024.05.006.
- 11 Anjie, S. – Jharap, B. – Jansen, J. M., et al.: P930 Rapid symptomatic improvement with subcutaneous infliximab induction treatment for patients with moderate-to-severe Crohn's disease: first results from the DIRECT-CD study. *Journal of Crohn's and Colitis*, 2024, 18, suppl. 1,

- s. i1682–i1683, doi: 10.1093/ecco-jcc/jjad212.1060.
- 12 Sandborn, W. J. – Hanauer, S. B. – Rutgeerts, P., et al.: Adalimumab for maintenance treatment of Crohn's disease: results of the CLASSIC II trial. *Gut*, 2007, 56, s. 1232–1239, doi: 10.1136/gut.2006.106781.
 - 13 Colombel, J.-F. – Sandborn, W. J. – Ghosh, S., et al.: Four-year maintenance treatment with adalimumab in patients with moderately to severely active ulcerative colitis: data from ULTRA 1, 2, and 3. *The American Journal of Gastroenterology*, 2014, 109, s. 1771–1780, doi: 10.1038/ajg.2014.242.
 - 14 Panaccione, R. – Sandborn, W. J. – D'Haens, G., et al.: Clinical benefit of long-term adalimumab treatment in patients with Crohn's disease following loss of response or intolerance to infliximab: 96-week efficacy data from GAIN/ADHERE trials. *Journal of Crohn's and Colitis*, 2018, 12, s. 930–938, doi: 10.1093/ecco-jcc/ijy050.
 - 15 Iborra, M. – García-Morales, N. – Rubio, S., et al.: Real-life experience with 4 years of golimumab persistence in ulcerative colitis patients. *Scientific Reports*, 2020, 10, 17774, doi: 10.1038/s41598-020-73577-0.
 - 16 Pang, X. – He, X. – Qiu, Z., et al.: Targeting integrin pathways: mechanisms and advances in therapy. *Signal Transduction and Targeted Therapy*, 2023, 8, doi: 10.1038/s41392-022-01259-6.
 - 17 Feagan, B. G. – Rutgeerts, P. – Sands, B. E., et al.: Vedolizumab as induction and maintenance therapy for ulcerative colitis. *New England Journal of Medicine*, 2013, 369, s. 699–710, doi: 10.1056/nejmoa1215734.
 - 18 Vermeire, S. – Jones, S. – Velazco, N., et al.: P0755 Long-term safety of subcutaneous vedolizumab in ulcerative colitis and Crohn's disease: Findings from the VISIBLE OLE study. *Journal of Crohn's and Colitis*, 2025, 19, suppl. 1, s. i1455–i1456, doi: 10.1093/ecco-jcc/jeae190.0929.
 - 19 Moschen, A. R. – Tilg, H. – Raine, T.: IL-12, IL-23 and IL-17 in IBD: immunobiology and therapeutic targeting. *Nature Reviews Gastroenterology & Hepatology*, 2018, 16, s. 185–196, doi: 10.1038/s41575-018-0084-8.
 - 20 Feagan, B. G. – Sandborn, W. J. – Gasink, C., et al.: Ustekinumab as induction and maintenance therapy for Crohn's disease. *New England Journal of Medicine*, 2016, 375, s. 1946–1960, doi: 10.1056/nejmoa1602773.
 - 21 Sands, B. E. – Sandborn, W. J. – Panaccione, R., et al.: Ustekinumab as induction and maintenance therapy for ulcerative colitis. *New England Journal of Medicine*, 2019, 381, s. 1201–1214, doi: 10.1056/nejmoa1900750.
 - 22 Sands, B. E. – Feagan, B. G. – Hunter-Gibbe, T., et al.: Mirikizumab improves quality of life in patients with moderately-to-severely active ulcerative colitis: results from the phase 3 LUCENT-1 induction and LUCENT-2 maintenance studies. *Crohn's & Colitis*, 2023, 360, 5, doi: 10.1093/crocol/otad070.
 - 23 Ferrante, M. – D'Haens, G. – Jairath, V., et al.: Efficacy and safety of mirikizumab in patients with moderately-to-severely active Crohn's disease: a phase 3, multicentre, randomised, double-blind, placebo-controlled and active-controlled, treat-through study. *The Lancet*, 2024, 404, s. 2423–2436, doi: 10.1016/s0140-6736(24)01762-8.
 - 24 Ferrante, M. – Panaccione, R. – Baert, F., et al.: Risankizumab versus ustekinumab for moderate-to-severe Crohn's disease: results from the multicentre, randomised, double-blind, placebo-controlled, withdrawal phase 3 FORTIFY maintenance trial. *The Lancet*, 2022, 399, s. 2031–2046, doi: 10.1016/s0140-6736(22)00466-4.
 - 25 Peyrin-Biroulet, L. – Chapman, J. C. – Colombel, J.-F., et al.: Risankizumab versus ustekinumab for moderate-to-severe Crohn's disease. *New England Journal of Medicine*, 2024, 391, s. 213–223, doi: 10.1056/nejmoa2314585.
 - 26 Panaccione, R. – Feagan, B. G. – Afzali, A., et al.: Efficacy and safety of intravenous induction and subcutaneous maintenance therapy with guselkumab for patients with Crohn's disease (GALAXI-2 and GALAXI-3): 48-week results from two phase 3, randomised, placebo and active comparator-controlled, double-blind, triple-dummy trials. *The Lancet*, 2025, 406, s. 358–375, doi: 10.1016/s0140-6736(25)00681-6.
 - 27 Hart, A. – Panaccione, R. – Steinwurz, F., et al.: Efficacy and safety of guselkumab subcutaneous induction and maintenance in participants with moderately to severely active Crohn's disease: results from the phase 3 GRAVITY study. *Gastroenterology*, 2025, 169, s. 308–325, doi: 10.1053/j.gastro.2025.02.033.
 - 28 Rubin, D. T. – Allegretti, J. R. – Panés, J., et al.: Guselkumab in patients with moderately to severely active ulcerative colitis (QUASAR): phase 3 double-blind, randomised, placebo-controlled induction and maintenance studies. *The Lancet*, 2025, 405, s. 33–49, doi: 10.1016/s0140-6736(24)01927-5.
 - 29 Kesik-Brodacka, M.: Progress in biopharmaceutical development. *Biotechnology and Applied Biochemistry*, 2017, 65, s. 306–322, doi: 10.1002/bab.1617.
 - 30 Jefremow, A. – Neurath, M. F.: Novel small molecules in IBD: Current state and future perspectives. *Cells*, 2023, 12, 1730, doi: 10.3390/cells12131730.
 - 31 Honap, S. – Agorogianni, A. – Colwill, M. J., et al.: JAK inhibitors for inflammatory bowel disease: recent advances. *Frontline Gastroenterology*, 2023, 15, s. 59–69, doi: 10.1136/flgastro-2023-102400.
 - 32 Lukáš, M.: Tofacitinib – první JAK inhibitor v léčbě ulcerózní kolitidy. Začátek terapeutické éry „malých molekul“ u idiopatických střevních zánětů? *Gastroenterologie a hepatologie*, 2018, 73, s. 363–365, doi: 10.14735/amgh2019363.
 - 33 Sandborn, W. J. – Su, C. – Sands, B. E., et al.: Tofacitinib as induction and maintenance therapy for ulcerative colitis. *New England Journal of Medicine*, 2017, 376, s. 1723–1736, doi: 10.1056/nejmoa1606910.
 - 34 Spinelli, A. – Bonovas, S. – Burisch, J., et al.: ECCO Guidelines on therapeutics in ulcerative colitis: surgical treatment. *Journal of Crohn's and Colitis*, 2021, 16, s. 179–189, doi: 10.1093/ecco-jcc/jjab177.
 - 35 Narula, N. – Pray, C. – Hamam, H., et al.: Tofacitinib for hospitalized acute severe ulcerative colitis management (The TRIUMPH Study). *Crohn's & Colitis*, 2024, 360, 7, doi: 10.1093/crocol/otaf013.
 - 36 Singh, A. – Goyal, M. K. – Midha, V., et al.: Tofacitinib in acute severe ulcerative colitis (TACOS): A randomized controlled trial. *American Journal of Gastroenterology*, 2023, 119, s. 1365–1372, doi: 10.14309/ajg.0000000000002635.
 - 37 Danese, S. – Vermeire, S. – Zhou, W., et al.: Upadacitinib as induction and maintenance therapy for moderately to severely active ulcerative colitis: results from three phase 3, multicentre, double-blind, randomised trials. *The Lancet*, 2022, 399, s. 2113–2128, doi: 10.1016/s0140-6736(22)00581-5.
 - 38 Loftus, E. V. – Panés, J. – Lacerda, A. P., et al.: Upadacitinib induction and maintenance therapy for Crohn's disease. *New England Journal of Medicine*, 2023, 388, s. 1966–1980, doi: 10.1056/nejmoa2212728.
 - 39 Feagan, B. G. – Danese, S. – Loftus, E. V., et al.: Filgotinib as induction and maintenance therapy for ulcerative colitis (SELECTION): a phase 2b/3 double-blind, randomised, placebo-controlled trial. *The Lancet*, 2021, 397, s. 2372–2384, doi: 10.1016/s0140-6736(21)00666-8.
 - 40 Choden, T. – Cohen, N. A. – Rubin, D. T.: Sphingosine-1 phosphate receptor modulators: the next wave of oral therapies in inflammatory bowel disease. *Gastroenterology & Hepatology*, 2022, 18, s. 265–271.
 - 41 Sandborn, W. J. – Feagan, B. G. – D'Haens, G., et al.: Ozanimod as induction and maintenance therapy for ulcerative colitis. *New England Journal of Medicine*, 2021, 385, s. 1280–1291, doi: 10.1056/nejmoa2033617.
 - 42 Sandborn, W. J. – Vermeire, S. – Peyrin-Biroulet, L., et al.: Etrasimod as induction and maintenance therapy for ulcerative colitis (ELEVATE): two randomised, double-blind, placebo-controlled, phase 3 studies. *The Lancet*, 2023, 401, s. 1159–1171, doi: 10.1016/s0140-6736(23)00061-2.
 - 43 EMA. Velsipity – Souhrn údajů o přípravku. Evropská léková agentura, 2025, dostupné z: https://www.ema.europa.eu/cs/documents/product-information/velsipyty-epar-product-information_cs.pdf, vyhledáno 29. 8. 2025.

Současné možnosti léčby refluxní choroby jícnu

MUDr. Tomáš Skutil | MUDr. Lucie Hajnová Interní gastroenterologická klinika, LF MU a FN Brno

- 1 Vakil, N. – van Zanten, S. V. – Kahrilas, P., et al.: The Montreal definition and classification of gastroesophageal reflux disease: a global evidence-based consensus. *Am J Gastroenterol*, 2006, 101, s. 1900–1920, doi: 10.1111/j.1572-0241.2006.00630.x.
- 2 Gyawali, C. P. – Yadlapati, R. – Fass, R., et al.: Updates to the modern diagnosis of GERD: Lyon consensus 2.0. *Gut*, 2024, 73, s. 361–371, doi: 10.1136/gutjnl-2023-330616.
- 3 Wickramasinghe, N. – Devanarayana, N. M.: Insight into global burden of gastroesophageal reflux disease: understanding its reach and impact. *World J Gastrointest Pharmacol Ther*, 2025, 16, 97918, doi: 10.4292/wjgpt.v16.i1.97918.
- 4 Katz, P. O. – Dunbar, K. B. – Schnoll-Susman, F. H., et al.: ACG Clinical Guideline for the diagnosis and management of gastroesophageal reflux disease. *Am J Gastroenterol*, 2022, 117, s. 27–56, doi: 10.14309/ajg.0000000000001538.
- 5 Skutil, T. – Konečný, Š. – Vaculová, J.: Refluxní choroba jícnu – současný pohled. *Acta Medica*, 2023, 12, s. 58–60.
- 6 Castell, D. O. – Murray, J. A. – Tutuian, R., et al.: The pathophysiology of gastro-oesophageal reflux disease – oesophageal manifestations. *Aliment Pharmacol Ther*, 2004, 20, suppl. 9, s. 14–25, doi: 10.1111/j.1365-2036.2004.02238.x.
- 7 Kroupa, R. – Cyrany, J. – Dolina, J., et al.: Gastroenterologie: příznaky a onemocnění horní části trávicího traktu. Doporučené diagnostické a terapeutické postupy pro všeobecné praktické lékaře, 2024. Dostupné z: www.svl.cz/svl-docs/doporucene-postupy/57/dp-gastro-2024.pdf, vyhledáno 10. 10. 2025.
- 8 Kroupa, R. – Konečný, Š. – Dolina, J.: Současné trendy v diagnostice a léčbě refluxní nemoci jícnu. *Vnitřní Léč*, 2018, 64, s. 588–594.
- 9 Zdrhova, L. – Bitnar, P. – Balihar, K., et al.: Breathing exercises in gastroesophageal reflux disease: a systematic review. *Dysphagia*, 2022, 37, s. 609–621, doi: 10.1007/s00455-022-10494-6.
- 10 Wilkinson, J. – Wade, A. – Thomas, S. J., et al.: Randomized clinical trial: a double-blind, placebo-controlled study to assess the clinical efficacy and safety of alginate-antacid (Gaviscon Double Action) chewable tablets in patients with gastro-oesophageal reflux disease. *Eur J Gastroenterol Hepatol*, 2019, 31, s. 86–93, doi: 10.1097/MEG.0000000000001258.
- 11 Savarino, V. – Pace, F. – Scarpignato, C., et al.: Randomised clinical trial: mucosal protection combined with acid suppression in the treatment of non-erosive reflux disease – efficacy of Esox, a hyaluronic acid-chondroitin sulphate based bioadhesive formulation. *Aliment Pharmacol Ther*, 2017, 45, s. 631–642, doi: 10.1111/apt.13914.
- 12 Nugent, C. C. – Falkson, S. R. – Terrell, J. M.: H2 Blockers. StatPearls, 2024. Dostupné z: www.ncbi.nlm.nih.gov/books/NBK525994/, vyhledáno 10. 10. 2025.
- 13 MacFarlane, B.: Management of gastroesophageal reflux disease in adults: a pharmacist's perspective. *Integr Pharm Res Pract*, 2018, 7, s. 41–52, doi: 10.2147/IPRPS142932.
- 14 Fox, R. K. – Muniraj, T.: Pharmacologic therapies in gastrointestinal diseases. *Med Clin North Am*, 2016, 100, s. 827–850, doi: 10.1016/j.mcna.2016.03.009.
- 15 Shin, J. M. – Sachs, G.: Pharmacology of proton pump inhibitors. *Curr Gastroenterol Rep*, 2008, 10, s. 528–534, doi: 10.1007/s11894-008-0098-4.
- 16 Scarpignato, C. – Gatta, L. – Zullo, A., et al.: Effective and safe proton pump inhibitor therapy in acid-related diseases – a position paper addressing benefits and potential harms of acid suppression. *BMC Med*, 2016, 14, s. 179, doi: 10.1186/s12916-016-0718-z.
- 17 Thurber, K. M. – Otto, A. O. – Stricker, S. L.: Proton pump inhibitors: understanding the associated risks and benefits of long-term use. *Am J Health Syst Pharm*, 2023, 80, s. 487–494, doi: 10.1093/ajhp/zxad009.
- 18 Miyazaki, H. – Igarashi, A. – Takeuchi, T., et al.: Vonoprazan versus proton-pump inhibitors for healing gastroesophageal reflux disease: a systematic review. *J Gastroenterol Hepatol*, 2019, 34, s. 1316–1328, doi: 10.1111/jgh.14664.
- 19 Shinozaki, S. – Osawa, H. – Hayashi, Y., et al.: Long-term vonoprazan therapy is effective for controlling symptomatic proton pump inhibitor-resistant gastroesophageal reflux disease. *Biomed Rep*, 2021, 14, s. 32, doi: 10.3892/br.2021.1408.
- 20 Tian, Z. C. – Wang, B. – Shan, C. X., et al.: A meta-analysis of randomized controlled trials to compare long-term outcomes of Nissen and Toupet fundoplication for gastroesophageal reflux disease. *PLoS One*, 2015, 10, e0127627, doi: 10.1371/journal.pone.0127627.
- 21 Rickenbacher, N. – Kötter, T. – Kochen, M. M., et al.: Fundoplication versus medical management of gastroesophageal reflux disease: systematic review and meta-analysis. *Surg Endosc*, 2014, 28, s. 143–155, doi: 10.1007/s00464-013-3140-z.

Spasmolytika v terapii abdominální bolesti

MUDr. Jan Miroslav Hartinger Farmakologický ústav, 1. LF UK a VFN Praha

- 1 Seifert, B. – Tachecí, I. – Bureš, J., et al.: Dráždivý tračník: doporučený diagnostický a terapeutický postup pro všeobecné praktické lékaře 2019. Praha, Společnost všeobecného lékařství ČLS JEP, 2019. Dostupné z: www.svl.cz/svl-docs/doporucene-postupy/64/drazdivy-tracnik-2019.pdf, vyhledáno 18. 9. 2025.
- 2 Koliba, P.: Menstruační bolesti. *Pharmacy for Practice*, 2010, 6, s. 232–234.
- 3 Müller-Lissner, S. – Andresen, V. – Corsetti, M., et al.: Functional abdominal cramping pain: expert practical guidance. *J Clin Gastroenterol*, 2022, 56, s. 844–852, doi: 10.1097/mcg.0000000000001764.
- 4 Itani, R. – Soubra, L. – Karout, S., et al.: Primary dysmenorrhea: pathophysiology, diagnosis, and treatment updates. *Korean J Fam Med*, 2022, 43, s. 101–108, doi: 10.4082/kjfm.21.0103.
- 5 Savarino, E. – Zingone, F. – Barberio, B., et al.: Functional bowel disorders with diarrhoea: Clinical guidelines of the United European

- Gastroenterology and European Society for Neurogastroenterology and Motility. *United European Gastroenterol J*, 2022, 10, s. 556–584, doi: 10.1002/ueg2.12259.
- Vasant, D. H. – Paine, P. A. – Black, C. J., et al.: British Society of Gastroenterology guidelines on the management of irritable bowel syndrome. *Gut*, 2021, 70, s. 1214–1240, doi: 10.1136/gutjnl-2021-324598.
 - Fukudo, S. – Okumura, T. – Inamori, M., et al.: Evidence-based clinical practice guidelines for irritable bowel syndrome 2020. *J Gastroenterol*, 2021, 56, s. 193–217, doi: 10.1007/s00535-020-01746-z.
 - Winsemius, A. – Meuwissen, I. M. – Boon, C., et al.: A pharmacokinetic comparison of the modified release capsule and a plain tablet formulation of mebeverine. *Int J Clin Pract*, 2002, 56, s. 659–662.
 - Rizea-Savu, S. – Duna, S. N. – Sandulovic, R. C.: Single dose study assessing the pharmacokinetic and metabolic profile of alverine citrate in healthy volunteers. *Front Pharmacol*, 2020, 11, 620451, doi: 10.3389/fphar.2020.620451.
 - Bolaji, O. O. – Onyeji, C. O. – Ogundaini, A. O., et al.: Pharmacokinetics and bioavailability of drotaverine in humans. *Eur J Drug Metab Pharmacokinet*, 1996, 21, s. 217–221, doi: 10.1007/bf03189716.
 - Evangelista, S.: Otilonium bromide: a selective spasmolytic for the gastrointestinal tract. *J Int Med Res*, 1999, 27, s. 207–222, doi: 10.1177/030006059902700501.
 - Platná SPC uváděných přípravků.
 - Tytgat, G. N.: Hyoscine butylbromide: a review of its use in the treatment of abdominal cramping and pain. *Drugs*, 2007, 67, s. 1343–1357, doi: 10.2165/00003495-200767090-00007.
 - Ford, A. C. – Moayyedi, P. – Chey, W. D., et al.: American college of gastroenterology monograph on management of irritable bowel syndrome. *Am J Gastroenterol*, 2018, 113, s. 1–18, doi: 10.1038/s41395-018-0084-x.
 - Lacy, B. E. – Pimentel, M. – Brenner, D. M., et al.: ACG Clinical Guideline: Management of irritable bowel syndrome. *Official Journal of the American College of Gastroenterology*, 2021, 116, s. 17–44, doi: 10.14309/ajg.0000000000001036.
 - Black, C. J. – Yuan, Y. – Selinger, C. P., et al.: Efficacy of soluble fibre, antispasmodic drugs, and gut-brain neuromodulators in irritable bowel syndrome: a systematic review and network meta-analysis. *Lancet Gastroenterol Hepatol*, 2020, 5, s. 117–131, doi: 10.1016/S2468-1253(19)30324-3.
 - Arnold, S. E. – Kahn, R. J. – Faldetta, L. L., et al.: Tricyclic antidepressants and peripheral anticholinergic activity. *Psychopharmacology (Berl)*, 1981, 74, s. 325–328, doi: 10.1007/bf00432740.
 - Plis, S. S. – Veselkina, O. V. – Klevno, V. A., et al.: Acute lethal poisonings in children: a 10-year retrospective study of the Moscow Region, Russia. *J Public Health Res*, 2021, 11, doi: 10.4081/jphr.2021.1932.
 - Goldstein, J. L. – Eisen, G. M. – Lewis, B., et al.: Video capsule endoscopy to prospectively assess small bowel injury with celecoxib, naproxen plus omeprazole, and placebo. *Clin Gastroenterol Hepatol*, 2005, 3, s. 133–141, doi: 10.1016/S1542-3565(04)00619-6.
 - Andrade, S. – Bartels, D. B. – Lange, R., et al.: Safety of metamizole: a systematic review of the literature. *J Clin Pharm Ther*, 2016, 41, s. 459–477, doi: 10.1111/jcpt.12422.
 - Breithaupt, M. H. – Krohmer, E. – Taylor, L., et al.: Time course of CYP3A activity during and after metamizole (dipyrone) in healthy volunteers. *British Journal of Clinical Pharmacology*, 2023, 89, s. 2458–2464, doi: 10.1111/bcp.15720.
 - Ruangritchankul, S. – Chantharit, P. – Srisuma, S., et al.: Adverse drug reactions of acetylcholinesterase inhibitors in older people living with dementia: a comprehensive literature review. *Ther Clin Risk Manag*, 2021, 17, s. 927–949, doi: 10.2147/tcrm.s323387.
 - Liacos, M. – Page, A. T. – Etherton-Beer, C.: Deprescribing in older people. *Aust Prescr*, 2020, 43, s. 114–120, doi: 10.18773/austprescr.2020.033.
 - Vargay, Z. – Deutsch, T. – Szatmári, I., et al.: The fate of drotaverine-acephyllinate in rat and man. II. Human pharmacokinetics of drotaverine-14C-acephyllinate. *Eur J Drug Metab Pharmacokinet*, 1984, 9, s. 17–29, doi: 10.1007/bf03189602.
 - Švihovec, J. – Bultas, J. – Anzenbacher, P., et al.: *Farmakologie*. Praha, Grada, 2018.

Novinky v léčbě dyslipidemií aneb ozvěny aktualizovaných doporučení

MUDr. Martin Šatný, Ph.D. Centrum preventivní kardiologie, III. interní klinika – klinika endokrinologie a metabolismu, 1. LF UK a VFN Praha

- Zdravotnická ročenka ČR 2021. ÚZIS ČR, 2021. Dostupné z: <https://www.uzis.cz/res/f/008435/zdroccz2021.pdf>, vyhledáno 25. 9. 2025.
- Borén, J. – Williams, K. J.: The central role of arterial retention of cholesterol-rich apolipoprotein-B-containing lipoproteins in the pathogenesis of atherosclerosis: a triumph of simplicity. *Curr Opin Lipidol*, 2016, 27, s. 473–483, doi: 10.1097/MOL.0000000000000330.
- Vrablik, M.: *Farmakoterapie dyslipidemie*. Praha, Maxdorf, 2016.
- Nicholls, S. J. – Puri, R. – Anderson, T., et al.: Effect of evolocumab on progression of coronary disease in statin-treated patients: the GLAGOV randomized clinical trial. *JAMA*, 2016, 316, s. 2373–2384, doi: 10.1001/jama.2016.16951.
- Nicholls, S. – Kataoka, Y. – Nissen, S., et al.: Effect of evolocumab on coronary plaque phenotype and burden in statin-treated patients following myocardial infarction. *J Am Coll Cardiol*, 2022, 15, s. 1308–1321.
- Räber, L. – Ueki, Y. – Otsuka, T., et al.: Effect of alirocumab added to high-intensity statin therapy on coronary atherosclerosis in patients with acute myocardial infarction: The PACMAN-AMI randomized clinical trial. *JAMA*, 2022, 327, s. 1771–1781, doi: 10.1001/jama.2022.5218.
- Sanin, V. – Koenig, W.: Therapie der Hypercholesterinämie in der Primärprävention. *Dtsch Med Wochenschr*, 2019, 144, s. 322–328, doi: 10.1055/a-0657-1668.
- Mach, F. – Baigent, C. – Catapano, A. L., et al.: 2019 ESC/EAS Guidelines for the management of dyslipidaemias: lipid modification to reduce cardiovascular risk. *European Heart Journal*, 2019, doi: 10.1093/eurheartj/ehz455.
- Visseren, F. L. J. – Mach, F. – Smulders, Y. M., et al.: 2021 ESC Guidelines on cardiovascular disease prevention in clinical practice. *European Heart Journal*, 2021, 42, s. 3227–3337, doi: 10.1093/eurheartj/ehab484.
- Marx, N. – Federici, M. – Schütt, K., et al.: 2023 ESC Guidelines for the management of cardiovascular disease in patients with diabetes. *European Heart Journal*, 2023, 44, s. 4043–4140, doi: 10.1093/eurheartj/ehad192.
- Mach, F. – Koskinas, K. C. – Roeters van Lennepe, J. E., et al.: 2025 Focused Update of the 2019 ESC/EAS Guidelines for the management of dyslipidaemias. *Eur Heart J*, 2025, doi: 10.1093/eurheartj/ehaf190.
- Kronenberg, F. – Mora, S. – Stroes, E. S. G., et al.: Lipoprotein(a) in atherosclerotic cardiovascular disease and aortic stenosis: a European Atherosclerosis Society consensus statement. *Eur Heart J*, 2022, 43, s. 3925–3946, doi: 10.1093/eurheartj/ehac361.
- Kronenberg, F.: Lipoprotein(a): from causality to treatment. *Curr Atheroscler Rep*, 2024, 26, s. 75–82, doi: 10.1007/s11883-024-01187-6.
- Vrablik, M. – Pišha, J. – Blaha, V., et al.: Stanovisko výboru České společnosti pro aterosklerózu k doporučením ESC/EAS pro diagnostiku a léčbu dyslipidemií z roku 2019. *Vnitřní Lékař*, 2019, 65, s. 743–754, doi: 10.36290/vnl.2019.131.
- Vrablik, M. – Cífková, R. – Tuka, V., et al.: Doporučený postup Evropské kardiologické společnosti pro prevenci kardiovaskulárních onemocnění v klinické praxi 2021. *Cor Vasa*, 2022, 64, s. 165–211, doi: 10.33678/cor.2022.035.
- Alirokumab (SPC). Souhrn informací o přípravku, www.sukl.cz.
- Evolokumab (SPC). Souhrn informací o přípravku, www.sukl.cz.
- Inclisiran (SPC). Souhrn informací o přípravku, www.sukl.cz.
- Parhofer, K. G. – Aguiar, C. – Banach, M., et al.: Expert opinion on the integration of combination therapy into the treatment algorithm for the management of dyslipidaemia. *Eur Heart J Cardiovasc Pharmacother*, 2025, 11, s. 367–379, doi: 10.1093/ehjcvp/pvae007.
- The Action to Control Cardiovascular Risk in Diabetes Study Group: Effects of intensive glucose lowering in type 2 diabetes. *New Eng J Med*, 2008, 358, s. 2545–2559, doi: 10.1056/NEJMoa0802743.
- The FIELD study investigators: Effects of long-term fenofibrate therapy on cardiovascular events in 9795 people with type 2 diabetes mellitus (the FIELD study): randomised controlled trial. *The Lancet*, 2005, 366, s. 1849–1861, doi: 10.1016/S0140-6736(05)67667-2.
- Preiss, D. – Logue, J. – Sammons, E., et al.: Effect of fenofibrate on progression of diabetic retinopathy. *NEJM Evid*, 2024, 3, EVIDo2400179, doi: 10.1056/EVIDo2400179.

Obezita a syndrom spánková apnoe

MUDr. Lujza Zikmund Galková I. interní kardiologická klinika, FN u sv. Anny v Brně; Klinika tělovýchovného lékařství a rehabilitace, FN u sv. Anny v Brně; Mezinárodní centrum klinického výzkumu (ICRC), FN u sv. Anny v Brně, LF MU

- Young, T. – Palta, M. – Dempsey, J., et al.: The occurrence of sleep-disordered breathing among middle-aged adults. *N Engl J Med*, 1993, 328, s. 1230–1235, doi: 10.1056/NEJM199304293281704.
- de Araujo Dantas, A. B. – Gonçalves, F. M. – Martins, A. A., et al.: Worldwide prevalence and associated risk factors of obstructive sleep apnea: a meta-analysis and meta-regression. *Sleep Breath*, 2023, 27, s. 2083–2109, doi: 10.1007/s11325-023-02810-7.
- Messineo, L. – Bakker, J. P. – Cronin, J., et al.: Obstructive sleep apnea and obesity: A review of epidemiology, pathophysiology and the effect of weight-loss treatments. *Sleep Med Rev*, 2024, 78, 101996, doi: 10.1016/j.smrv.2024.101996.
- Pengo, M. F. – Schwarz, E. I. – Barbé, F., et al.: ANDANTE collaborators: Effect of CPAP therapy on blood pressure in patients with obstructive sleep apnoea: a worldwide individual patient data meta-analysis. *Eur Respir J*, 2025, 65, 2400837, doi: 10.1183/13993003.00837-2024.
- Scheen, A.: L'étude clinique du mois. Étude SURMOUNT-O5A: Le tirzepatide améliore le syndrome d'apnée/hypopnée obstructive du sommeil chez le sujet avec obésité [SURMOUNT-O5A study: tirzepatide improves obstructive sleep apnoea in patients with obesity]. *Rev Med Liege*, 2025, 80, s. 251–257.
- Masa, J. F. – Pépin, J. L. – Borel, J. C., et al.: Obesity hypoventilation syndrome. *Eur Respir Rev*, 2019, 28, 180097, doi: 10.1183/16000617.0097-2018.
- Mokhlesi, B.: Obesity hypoventilation syndrome: a state-of-the-art review. *Respir Care*, 2010, 55, s. 1347–1362, diskuzie s. 1363–1365.
- Mokhlesi, B. – Masa, J. F. – Brozek, J. L., et al.: Evaluation and management of obesity hypoventilation syndrome. An Official American Thoracic Society Clinical Practice Guideline. *Am J Respir Crit Care Med*, 2019, 200, s. e6–e24, doi: 10.1164/rccm.201905-10715T.
- Malhotra, A. – Grunstein, R. R. – Fietze, I., et al.: SURMOUNT-O5A Investigators: Tirzepatide for the treatment of obstructive sleep apnea and obesity. *N Engl J Med*, 2024, 391, s. 1193–1205, doi: 10.1056/NEJMoa2404881, erratum in: *N Engl J Med*, 2024, 391, 1464.

Benefity nad rámec hubnutí – co umějí nová antiobezitika

MUDr. Dita Pichlerová, Ph.D. Centrum léčby obezity, Interní klinika, 2. LF UK a FN Motol, Praha

- Locke, A. E. – Kahali, B. – Berndt, S. I., et al.: Genetic studies of body mass index yield new insights for obesity biology. *Nature*, 2015, 518, s. 197–206, doi: 10.1038/nature14177.
- Friedrichsen, M. – Breitschaft, A. – Tadayon, S., et al.: The effect of semaglutide 2.4 mg once weekly on energy intake, appetite, control of eating, and gastric emptying in adults with obesity. *Diabetes Obes Metab*, 2021, 23, s. 754–762, doi: 10.1111/dom.14280.
- Bettadapura, S. – Dowling, K. – Jablon, K., et al.: Changes in food preferences and ingestive behaviors after glucagon-like peptide-1 analog treatment: techniques and opportunities. *Int J Obes*, 2025, 49, s. 418–426, doi: 10.1038/s41366-024-01500-y.
- Jones, L. A. – Brierley, D. I.: GLP-1 and the neurobiology of eating control: recent advances. *Endocrinology*, 2025, 166, bqae167, doi: 10.1210/endo.2024-0167.
- Pichlerová, D.: Potenciál nových antiobezitik a možné klinické důsledky. *ACTA MEDICINAE*, 2025, 14, s. 84–88.
- Marso, S. P. – Daniels, G. H. – Brown-Frandsen, K., et al.: Liraglutide and cardiovascular outcomes in type 2 diabetes. *N Engl J Med*, 2016, 375, s. 311–322, doi: 10.1056/NEJMoa1603827.
- Husain, M. – Bain, S. C. – Jeppesen, O. K., et al.: Semaglutide (SUSTAIN and PIONEER) reduces cardiovascular events in type 2 diabetes across varying cardiovascular risk. *Diabetes Obes Metab*, 2020, 22, s. 442–451, doi: 10.1111/dom.13955.
- Packer, M. – Zile, M. R. – Kramer, C. M., et al.: Tirzepatide for heart

- failure with preserved ejection fraction and obesity. *N Engl J Med*, 2025, 392, s. 427–437, doi: 10.1056/NEJMoa2410027.
- 9 Perkovic, V. – Tuttel, K. R. – Rossing, P., et al.: Effects of semaglutide on chronic kidney disease in patients with type 2 diabetes. *N Engl J Med*, 2024, 391, s. 109–121, doi: 10.1056/NEJMoa2403347.
 - 10 Kamrul-Hasan, A. – Patra, S. – Dutta, D., et al.: Renal effects and safety of tirzepatide in subjects with and without diabetes: A systematic review and meta-analysis. *World J Diabetes*, 2025, 16, 101282, doi: 10.4239/wjdv.16i2.101282.
 - 11 Mima, A. – Gotoda, H. – Lee, R., et al.: Effects of incretin-based therapeutic agents including tirzepatide on renal outcomes in patients with type 2 diabetes: A systematic review and meta-analysis. *Metabol Open*, 2023, 17, 100236, doi: 10.1016/j.metop.2023.100236.
 - 12 Newsome, P. N. – Sanyal, A. J. – Engebretsen, K. A., et al.: Semaglutide 2.4 mg in participants with metabolic dysfunction-associated steatohepatitis: baseline characteristics and design of the phase 3 ESSENCE trial. *Aliment Pharmacol Ther*, 2024, 60, s. 1525–1533, doi: 10.1111/apt.18331.
 - 13 Loomba, R. – Hartman, M. L. – Lawitz, E. J., et al.: Tirzepatide for metabolic dysfunction-associated steatohepatitis with liver fibrosis. *N Engl J Med*, 2024, 391, s. 299–310, doi: 10.1056/NEJMoa2401943.
 - 14 Jastreboff, A. M. – Aronne, L. J. – Ahmad, N. N., et al.: Tirzepatide once weekly for the treatment of obesity. *N Engl J Med*, 2022, 387, s. 205–216, doi: 10.1056/NEJMoa2206038.
 - 15 Liu, S. – Hu, J. – Zhao, C. – Liu, H.: Comparative efficacy of incretin drugs on glycemic control, body weight, and blood pressure in adults with overweight or obesity and with/without type 2 diabetes: a systematic review and network meta-analysis. *Front Endocrinol*, 2025, 16, 1513641, doi: 10.3389/fendo.2025.1513641.
 - 16 Yao, H. – Zhang, A. – Li, D., et al.: Comparative effectiveness of GLP-1 receptor agonists on glycaemic control, body weight, and lipid profile for type 2 diabetes: systematic review and network meta-analysis. *BMJ*, 2024, 384, e076410, doi: 10.1136/bmj-2023-076410.
 - 17 Wang, W. – Wang, Q. – Qi, X., et al.: Associations of semaglutide with first-time diagnosis of Alzheimer's disease in patients with type 2 diabetes: Target trial emulation using nationwide real-world data in the US. *Alzheimers Dement*, 2024, 20, s. 8661–8672, doi: 10.1002/alz.14313.
 - 18 De Giorgi, R. – Koychev, I. – Adler, A. I., et al.: 12-month neurological and psychiatric outcomes of semaglutide use for type 2 diabetes: a propensity-score matched cohort study. *E Clinical Medicine*, 2024, 74, 102726, doi: 10.1016/j.eclinm.2024.102726.
 - 19 Hendershot, C. S. – Bremmer, M. P. – Paladino, M. B., et al.: Once-weekly semaglutide in adults with alcohol use disorder: a randomized clinical trial. *JAMA Psychiatry*, 2025, 82, s. 395–405, doi: 10.1001/jamapsychiatry.2024.4789.
 - 20 Quddos, F. – Huhshman, Z. – Tegge, A., et al.: Semaglutide and tirzepatide reduce alcohol consumption in individuals with obesity. *Soc Rep*, 2023, 13, 20998, doi: 10.1038/s41598-023-48267-2.
 - 21 Wang, W. – Volkow, N. D. – Berger, N. A., et al.: Association of semaglutide with reduced incidence and relapse of cannabis use disorder in real-world populations: a retrospective cohort study. *Mol Psychiatry*, 2024, 29, s. 2587–2598, doi: 10.1038/s41380-024-02498-5.
 - 22 Drucker, D. J.: The cardiovascular biology of glucagon-like peptide-1. *Cell Metab*, 2016, 24, s. 15–30, doi: 10.1016/j.cmet.2016.06.009.
 - 23 Ryan, D. – Acosta, A.: GLP-1 receptor agonists: Nonglycemic clinical effects in weight loss and beyond. *Obesity*, 2015, 23, s. 1119–1129, doi: 10.1002/oby.21107.
 - 24 Nauck, M. A. – Niedereichholz, U. – Ettler, R., et al.: Glucagon-like peptide 1 inhibition of gastric emptying outweighs its insulinotropic effects in healthy humans. *Am J Physiol*, 1997, 273, s. E981–E988, doi: 10.1152/ajpendo.1997.273.5.E981.
 - 25 Marso, S. P. – Bain, S. C. – Consoli, A., et al.: Semaglutide and cardiovascular outcomes in patients with type 2 diabetes. *N Engl J Med*, 2016, 375, s. 1834–1844, doi: 10.1056/NEJMoa1607141.
 - 26 Lincoff, A. M. – Brown-Frandsen, K. – Colhoun, H. M., et al.: Semaglutide and cardiovascular outcomes in obesity without diabetes. *N Engl J Med*, 2023, 389, s. 2221–2232, doi: 10.1056/NEJMoa2307563.
 - 27 Malhotra, A. – Grunstein, R. R. – Fietze, I., et al.: Tirzepatide for the treatment of obstructive sleep apnea and obesity. *N Engl J Med*, 2024, 391, s. 1193–1205, doi: 10.1056/NEJMoa2404881.

Současné možnosti léčby infekce HIV

doc. MUDr. Hanuš Rozsypal, CSc. Klinika infekčních a tropických nemocí, 1. LF UK a FN Bulovka, Praha

- 1 Michienzi, S. M. – Barrios, M. – Badowski, M. E.: Evidence regarding rapid initiation of antiretroviral therapy in patients living with HIV. *Curr Infect Dis Rep*, 2021, 23, s. 7.
- 2 Han, W. M. – Avihingsanon, A. – Rajasurir, R., et al.: CD4/CD8 ratio recovery among people living with HIV starting with first-line integrase strand transfer inhibitors: a prospective regional cohort analysis. *J Acquir Immune Defic Syndr*, 2023, 92, s. 180–188.
- 3 INSIGHT START Study Group: Initiation of antiretroviral therapy in early asymptomatic HIV infection. *N Engl J Med*, 2015, 373, s. 795–807.
- 4 Cohen, M. S. – Chen, Y. Q. – McCauley, M., et al.: Antiretroviral therapy for the prevention of HIV-1 transmission. *N Engl J Med*, 2016, 375, s. 830–839.
- 5 Langewitz, W. – Denz, M. – Keller, A., et al.: Spontaneous talking time at start of consultation in outpatient clinic: cohort study. *BMJ*, 2002, 325, s. 682–683.
- 6 TEMPRANO ANRS 12136 Study Group: A trial of early antiretrovirals and isoniazid preventive therapy in Africa. *N Engl J Med*, 2015, 373, s. 808–822.
- 7 Labhardt, N. D. – Ringera, I. – Lejone, T. I., et al.: Effect of offering same-day ART vs usual health facility referral during home-based HIV testing on linkage to care and viral suppression among adults with HIV in Lesotho: The CASCADE Randomized Clinical Trial. *JAMA*, 2018, 319, s. 1103–1112.
- 8 Snopková, S. – Rozsypal, H. – Dlouhý, P., et al.: Péče o dospělé infikované HIV. Doporučený postup Společnosti infekčního lékařství ČLS JEP, 2024. Dostupné z: www.infektologie.cz/standardy2/DP_HIV_2024.pdf, vyhledáno 22. 9. 2025.
- 9 EACS Guidelines verze 12.1, listopad 2024.
- 10 Mayer, K. H. – Molina, J. M. – Thompson, M. A., et al.: Emtricitabine and tenofovir alafenamide vs emtricitabine and tenofovir disoproxil fumarate for HIV pre-exposure prophylaxis (DISCOVER): primary results from a randomised, double-blind, multicentre, active-controlled, phase 3, non-inferiority trial. *Lancet*, 2020, 396, s. 239–254, doi: 10.1016/S0140-6736(20)30540-6.
- 11 Behrens, G. M. – Reiss, P.: Abacavir and cardiovascular risk. *Curr Opin Infect Dis*, 2010, 23, s. 9–14.
- 12 Sabin, C. A. – Worm, S. W. – Weber, R., et al.: Use of nucleoside reverse transcriptase inhibitors and risk of myocardial infarction in HIV-infected patients enrolled in the D:A:D study: a multi-cohort collaboration. *Lancet*, 2008, 371, s. 1417–1426.
- 13 Sax, P. E. – Pozniak, A. – Montes, M. L., et al.: Coformulated bictegravir, emtricitabine, and tenofovir alafenamide versus dolutegravir with emtricitabine and tenofovir alafenamide, for initial treatment of HIV-1 infection (GSUS-380-1490): a randomised, double-blind, multicentre, phase 3, non-inferiority trial. *Lancet*, 2017, 390, s. 2073–2082.
- 14 Perez-Molina, J. A. – Pulido, F. – Di Giambenedetto, S., et al.: Individual patient data meta-analysis of randomized controlled trials of dual therapy with a boosted PI plus lamivudine for maintenance of virological suppression: the GeSIDA study 9717. *J Antimicrob Chemother*, 2018, 73, s. 2927–2935.
- 15 Ryan, P. – Blanco, J. L. – Masia, M., et al.: Maintenance therapy with dolutegravir and lamivudine versus bictegravir, emtricitabine, and tenofovir alafenamide in people with HIV (PASO-DOUBLE): 48-week results from a randomised, multicentre, open-label, non-inferiority trial. *Lancet HIV*, 2025, 12, s. e473–e484, doi: 10.1016/S2352-3018(25)00105-5.
- 16 Overton, E. T. – Richmond, G. – Rizzardini, G., et al.: Long-acting cabotegravir and rilpivirine dosed every 2 months in adults with HIV-1 infection (ATLAS-2M), 48-week results: a randomised, multicentre, open-label, phase 3b, non-inferiority study. *Lancet*, 2021, 396, s. 1994–2005.
- 17 Ring, K. – Elias, A. – Devonald, M., et al.: Long-acting injectable cabotegravir and rilpivirine in observational cohort studies: A systematic review on virological failure, resistance and re-suppression outcomes in virally suppressed individuals living with HIV. *HIV Med*, 2025, 26, s. 1267–1288.
- 18 Grant, P. M. – Kozal, M. J.: Fostemsavir: a first-in-class HIV-1 attachment inhibitor. *Curr Opin HIV AIDS*, 2022, 17, s. 32–35.
- 19 Rukobia: Souhrn údajů o přípravku.
- 20 Sunlenca: Souhrn údajů o přípravku.
- 21 Carnes, S. K. – Sheehan, J. H. – Aiken, C.: Inhibitors of the HIV-1 capsid, a target of opportunity. *Curr Opin HIV AIDS*, 2018, 13, s. 359–365.
- 22 Segal-Maurer, S. – DeJesus, E. – Stellbrink, H. J., et al.: CAPELLA Study Investigators: Capsid inhibition with lenacapavir in multidrug-resistant HIV-1 infection. *N Engl J Med*, 2022, 386, s. 1793–1803.
- 23 Study to compare an oral weekly islatravir/lenacapavir regimen with standard of care in virologically suppressed people with HIV-1 (ISLEND-2). Dostupné z: <https://www.clinicaltrials.com/study?ncid=NCT06630299>, vyhledáno 22. 9. 2025.
- 24 European Medicines Agency: Yetyuo. Dostupné z: <https://www.ema.europa.eu/en/medicines/human/EPAR/yetyuo>, vyhledáno 22. 9. 2025.
- 25 Yang, X. – Su, B. – Zhang, X., et al.: Incomplete immune reconstitution in HIV/AIDS patients on antiretroviral therapy: Challenges of immunological non-responders. *J Leukoc Biol*, 2020, 107, s. 597–612.
- 26 Wong, J. K. – Yukl, S. A.: Tissue reservoirs of HIV. *Curr Opin HIV AIDS*, 2016, 11, s. 362–370.
- 27 Sever, B. – Otsuka, M. – Fujita, M., et al.: A review of FDA-approved anti-HIV-1 drugs, anti-gag compounds, and potential strategies for HIV-1 eradication. *Int J Mol Sci*, 2024, 25, s. 3659–3689.

Trendy současné vakcinace

prof. MUDr. Roman Prymula, CSc., Ph.D. Ústav preventivního lékařství, LF UK Hradec Králové

- 1 Andre, K. – Archibugi, D. – Aston, J., et al.: Vaccine innovation, translational research and the management of knowledge accumulation. *Vaccine*, 2012, 30, s. 4785–4797.
- 2 Deeks, S. – Drosten, C. – Picker, L., et al.: Roadblocks to translational challenges on viral pathogenesis. *Curr Opin Virol*, 2013, 3, s. 482–491.
- 3 Fan, T. – Zhang, M. – Yang, J., et al.: Therapeutic cancer vaccines: advancements, challenges and prospects. *Signal Transduct Target Ther*, 2023, 8, s. 351.
- 4 Muteeb, G. – Rehman, M. T. – Shahwan, M. – Aatif, M.: Origin of antibiotics and antibiotic resistance, and their impacts on drug development: a narrative review. *Pharmaceuticals*, 2023, 16, s. 1615.
- 5 Lahiri, A. – Maji, A. – Potdar, P. D., et al.: Lung cancer immunotherapy: progress, pitfalls, and promises. *Mol Cancer*, 2023, 22, s. 176.
- 6 García-Atutxa, I. – Mondragón-Terán, P. – Huerta-Saquero, A. – Villanueva-Flores, F.: Advancements in monkeypox vaccines development: a critical review of emerging technologies. *Front Immunol*, 2024, 15, 1365874.
- 7 Mangen, J. F.: Vaccines in the era of emerging infectious diseases: immune mechanisms and innovations. *Newport Int J Public Health Pharm*, 2024, 3, s. 45–53.
- 8 Barclay, W. R. – Stylianou, E. – McShane, H., et al.: Mucosal delivery of tuberculosis vaccines: a review of current approaches and challenges. *Expert Rev Vaccines*, 2019, 18, s. 1271–1284.
- 9 Adamina, M. – Ahn, S. – Alizadeh, D., et al.: Synthetic nanoparticles for vaccines and immunotherapy. *ACS Nano*, 2015, 9, s. 3115–3132.
- 10 Magnusson, M.: Reactivity of human and porcine natural interferon-alpha producing cells to immunostimulatory DNA. *J Immunol Methods*, 2003, 283, s. 75–85.
- 11 Aarestrup, F. – Ahuja, S. – Aidara-Kane, A., et al.: Exploring the evidence base for national and regional policy interventions to combat resistance. *Lancet*, 2015, 387, s. 285–295.
- 12 Bosch, X. – Butler, R. – Findlow, J., et al.: TIPICO IX: report of the 9th interactive infectious disease workshop on infectious diseases and vaccines. *Expert Rev Vaccines*, 2019, 18, s. 415–423.
- 13 Brossart, P. – Freedman, R. S. – Fulop, T., et al.: Cancer vaccines in ovarian cancer: how can we improve? *Int J Mol Sci*, 2016, 17, 701.
- 14 Attlan, M. – Bourhy, H. – Briggs, D. J., et al.: Renewed global partnerships and redesigned roadmaps for rabies prevention and control. *Adv Prev Med*, 2011, 2011, 923149.

Důležitost očkování proti chřipce u pacientů s kardiovaskulárním onemocněním

MUDr. Petra Vysočanová Interní kardiologická klinika, LF MU a FN Brno

- Heidecker, B. – Libby, P. – Vassiliou, V. S., et al.: Vaccination as a new form of cardiovascular prevention: a European Society of Cardiology clinical consensus statement. *Eur Heart J*, 2025, 46, s. 3518–3531, doi: 10.1093/eurheartj/ehaf384.
- Nichol, K. L. – Nordin, J. – Mullooly, J., et al.: Influenza vaccination and reduction in hospitalizations for cardiac disease and stroke among the elderly. *N Engl J Med*, 2003, 348, s. 1322–1332, doi: 10.1056/NEJMoa025028.
- Udell, J. A. – Zawi, R. – Bhatt, D. L., et al.: Association between influenza vaccination and cardiovascular outcomes in high-risk patients: a meta-analysis. *JAMA*, 2013, 310, s. 1711–1720.
- Modin, D. – Jørgensen, M. E. – Gislason, G., et al.: Influenza vaccine in heart failure. *Circulation*, 2019, 139, s. 575–586, doi: 10.1161/CIRCULATIONAHA.118.036788.
- Hemmat, N. – Ebadi, A. – Badalzadeh, R., et al.: Viral infection and atherosclerosis. *Eur J Clin Microbiol Infect Dis*, 2018, 37, s. 2225–2233, doi: 10.1007/s10096-018-3370-z.
- Ito, T. – Akamatsu, K. – Fujita, S. I., et al.: Transient depression of myocardial function after influenza virus infection: A study of echocardiographic tissue imaging. *PLoS One*, 2019, 14, s. e0221628, doi: 10.1371/journal.pone.0221628.
- Kwong, J. C. – Schwartz, K. L. – Campitelli, M. A., et al.: Acute myocardial infarction after laboratory-confirmed influenza infection. *N Engl J Med*, 2018, 378, s. 345–353, doi: 10.1056/NEJMoa1702090.
- Modin, D. – Claggett, B. – Johansen, N. D., et al.: Excess mortality and hospitalizations associated with seasonal influenza in patients with heart failure. *J Am Coll Cardiol*, 2024, 84, s. 2460–2467, doi: 10.1016/j.jacc.2024.08.048.
- Kulick, E. R. – Alvord, T. – Canning, M., et al.: Risk of stroke and myocardial infarction after influenza-like illness in New York State. *BMC Public Health*, 2021, 21, s. 864, doi: 10.1186/s12889-021-10916-4.
- Clar, C. – Oseni, Z. – Flowers, N., et al.: Influenza vaccines for preventing cardiovascular disease. *Cochrane Database Syst Rev*, 2015, 5, CD005050, doi: 10.1002/14651858.CD005050.pub3.
- Maniar, Y. M. – Al-Abdoh, A. – Michos, E. D.: Influenza vaccination for cardiovascular prevention: further insights from the IAMI trial and an updated meta-analysis. *Curr Cardiol Rep*, 2022, 24, s. 1327–1335, doi: 10.1007/s11886-022-01748-8.
- Modin, D. – Lassen, M. C. H. – Claggett, B., et al.: Influenza vaccination and cardiovascular events in patients with ischaemic heart disease and heart failure: A meta-analysis. *Eur J Heart Fail*, 2023, 25, s. 1685–1692, doi: 10.1002/ejhf.2945.
- Gurfinkel, E. P. – Leon de la Fuente, R. – Mendiz, O. – Mautner, B.: Flu vaccination in acute coronary syndromes and planned percutaneous coronary interventions (FLUVACS) Study. *Eur Heart J*, 2004, 25, s. 25–31, doi: 10.1016/j.ehj.2003.10.018.
- Fröbert, O. – Götzberg, M. – Angeräs, O., et al.: Influenza vaccination after myocardial infarction: a randomized, double-blind, placebo-controlled, multicenter trial. *Circulation*, 2021, 144, s. 1476–1484, doi: 10.1161/CIRCULATIONAHA.121.057042.
- Liu, X. – Zhang, J. – Liu, F., et al.: Association between influenza vaccination and prognosis in patients with ischemic heart disease: A systematic review and meta-analysis of randomized controlled trials. *Travel Med Infect Dis*, 2025, 64, 102793, doi: 10.1016/j.tmaid.2024.102793.
- Loeb, M. – Roy, A. – Dokainish, H. – Dans, A., et al.: Influenza vaccine to reduce adverse vascular events in patients with heart failure: a multinational randomised, double-blind, placebo-controlled trial. *Lancet Glob Health*, 2022, 10, s. e1835–e1844, doi: 10.1016/S2214-109X(22)00432-6.
- Ciszewski, A. – Bilinska, Z. T. – Brydak, L. B., et al.: Influenza vaccination in secondary prevention from coronary ischaemic events in coronary artery disease: FLUCAD study. *Eur Heart J*, 2008, 29, s. 1350–1358, doi: 10.1093/eurheartj/ehm581.
- Omid, F. – Zangiabadian, M. – Shahidi Bonjar, A. H., et al.: Influenza vaccination and major cardiovascular risk: a systematic review and meta-analysis of clinical trials studies. *Sci Rep*, 2023, 13, s. 20235, doi: 10.1038/s41598-023-47690-9.
- Doporučení České vakcinologické společnosti ČLS JEP k očkování proti chřipce, 2025. Dostupné z: <https://www.vakcinace.eu/doporuzeni-a-stanoviska/doporuzeni-ceske-vakcinologicke-spolecnosti-clj-jep-k-ockovani-proti-chripce-4>, vyhledáno 8. 10. 2025.
- Grohskopf, L. A. – Blanton, L. H. – Ferdinands, J. M., et al.: Prevention and control of seasonal influenza with vaccines: recommendations of the advisory committee on immunization practices — United States, 2024–25 Influenza Season. *MMWR Recomm Rep*, 2024, 73, s. 1–34.
- Peikert, A. – Claggett, B. L. – Kim, K., et al.: Association of post-vaccination adverse reactions after influenza vaccine with mortality and cardiopulmonary outcomes in patients with high-risk cardiovascular disease: the INVESTED trial. *Eur J Heart Fail*, 2023, 25, s. 299–310, doi: 10.1002/ejhf.2716.

Sideropenická anemie a anemie chronických chorob – nejběžnější typy anemií

MUDr. Eva Havlová Ústav klinické biochemie a hematologie, FN a LF UK, Plzeň

- Čermák, J.: Nedostatek železa – patofyziologie a léčba. ProLekare.cz. Dostupné z: <https://www.prolekare.cz/kreditovane-kurz/nedostatek-zeleza-patofyziologie-a-lecba-105483/nedostatek-zeleza-patofyziologie-a-lecba>, vyhledáno 10. 8. 2025.
- Camaschella, C.: Iron deficiency: new insights into diagnosis and treatment. *Hematology Am Soc Hematol Educ Program*, 2015, s. 8–13.
- Dostupné z: <https://ukbh.fnplzen.cz/cs/node/988>, vyhledáno 27. 2. 2025.
- Nieriella, M. A. – Jayasena, H. – Withanachchi, A., et al.: Mistakes in the management of iron deficiency anaemia: a narrative review. *Hematology*, 2024, 29, 2387987.
- Zajícová, M.: Farmaceutická péče u pacientů se substitucí železa při anemii. *Prakt Lékáren*, 2012, 8, s. 225–226.
- Dostupné z: <https://old.fnplzen.cz/pracoviste/ukbh/detail.asp?id=299&retezparametru=>, vyhledáno 27. 2. 2025.
- Avni, T.: The safety of intravenous iron preparations: systematic review and meta-analysis. *Mayo Clin Proc*, 2015, 90, s. 12–23.
- McDonagh, T. A., et al.: 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: Developed by the Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC) with the special contribution of the Heart Failure Association (HFA) of the ESC. *Eur Heart J*, 2021, 42, s. 3599–3726.
- D'Amico, F., et al.: Oral iron for IBD patients: lessons learned at time of COVID-19 pandemic. *J Clin Med*, 2020, 9, 1536.
- Ganz, T., et al.: Iron administration, infection, and anemia management in CKD: Untangling the effects of intravenous iron therapy on immunity and infection risk. *Kidney Med*, 2020, 2, s. 341–353.
- Gemicic, C., et al.: Is there any role of intravenous iron for the treatment of anemia in cancer? *BMC Cancer*, 2016, 16, 661.

Diferenciální diagnostika bolesti zad

MUDr. Luděk Ryba, Ph.D. | MUDr. Michael Lujc Klinika ortopedie a spondylochirurgie, FN Brno, LF MU Brno

Ph.Dr. Iva Marková, Ph.D. Fakulta zdravotnických studií, Univerzita Pardubice

- Skála, B. – Effler, J. – Herle, P., et al.: *Bolesti zad – vertebrogenní algický syndrom*. Praha, Společnost všeobecného lékařství ČLS JEP, 2011, s. 1–20.
- Kadaňka, Z.: Spondylogenní cervikální myelopatie. *Česk Slov Neurol N*, 2010, 73/106, s. 209–226.
- Kovalová, I. – Keřkovský, M. – Kadaňka, Z., et al.: Prevalence and imaging characteristics of asymptomatic and symptomatic spondylitic cervical spinal cord compression. *Spine*, 2016, 41, s. 1908–1916.
- Nicholas, M. K. – Linton, S. J. – Watson, P. J., et al.: „Decade of the Flags“ Working Group: Early identification and management of psychological risk factors („yellow flags“) in patients with low back pain: a reappraisal. *Phys Ther*, 2011, 91, s. 737–753.
- Malfliet, A. – Ickmans, K. – Huysmans, E., et al.: Best evidence rehabilitation for chronic pain. Part 3: Low back pain. *J Clin Med*, 2019, 8, s. 1063.
- Barsa, P. – Häckel, M.: Systém „červených praporeků“ v diagnostice a terapii bolesti zad. *Bolest*, 2004, suppl. 2, s. 15–19.
- Hakl, M.: Léčba bolesti zad. *Čas Lék Čes*, 2018, 157, s. 62–66.
- Ryba, L. – Vyskočil, R. – Marková, I.: Diferenciální diagnostika bolesti páteře, indikace fyzioterapie při bolesti zad. *Med Praxi*, 2022, 19, s. 272–278.
- Schmeiser, G. – Bergmann, J. I. – Papavero, L., et al.: Surgical treatment of multilevel degenerative cervical myelopathy: open-door laminoplasty and fixation with unilateral approach. A feasibility study. *J Neurol Surg A Cent Eur Neurosurg*, 2022, 83, s. 494–501, doi: 10.1055/s-0041-1739224.

Moderní přístupy k léčbě osteoporózy; současné možnosti farmakologické léčby

MUDr. Zdeněk Fojtík, Ph.D., Diagnosticko-terapeutické centrum, revmatologická ambulance, FN Brno a LF MU, Brno

- FRAX Fracture Risk Assessment Tool; nástroj pro výpočet. Dostupné z: <https://frax.shef.ac.uk/FRAX/tool.aspx?lang=cz>, vyhledáno 15. 3. 2025.
- Harvey, N. C. – Biver, E. – Kaufman, J. M., et al.: The role of calcium supplementation in healthy musculoskeletal ageing: An Experts consensus meeting of the European Society for Clinical and Economic Aspects of Osteoporosis, Osteoarthritis and Musculoskeletal Diseases (ESCEO) and the International Foundation for Osteoporosis (IOF). *Osteoporos Int*, 2017, 28, s. 447–462.
- Pérez-López, F. R. – Chedraui, P. – Pilz, S.: Vitamin D supplementation after the menopause. *Ther Adv Endocrinol Metab*, 2020, 11, s. 1–13.
- Cashman, K. D. – Dowling, K. G. – Skrabakova, Z., et al.: Vitamin D deficiency in Europe: pandemic? *Am J Clin Nutr*, 2016, 103, s. 1033–1044.
- Gallagher, J. C. – Sai, A. – Templin, T., et al.: Dose response to vitamin D supplementation in postmenopausal women: a randomized trial. *Ann Intern Med*, 2012, 156, s. 425–437.
- Lips, P., et al.: Current vitamin D status in European and Middle East countries and strategies to prevent vitamin D deficiency: a position statement of the European Calcified Tissue Society. *Eur J Endocrinol*, 2019, 180, s. P23–P54.
- Kanis, J. A. – Cooper, C. – Rizzoli, R., et al.: European guidance for the diagnosis and management of osteoporosis in postmenopausal women. *Osteoporos Int*, 2019, 30, s. 3–44.
- Anderson, G. L.: The Women's Health Initiative Steering Committee: Effects of conjugated equine estrogen in postmenopausal women with hysterectomy: the Women's Health Initiative randomized controlled trial. *JAMA*, 2004, 291, s. 1701–1712.
- Cauley, J. A. – Robbins, J. – Chen, Z., et al.: Effects of estrogen plus progestin on risk of fracture and bone mineral density: the Women's Health Initiative randomized trial. *JAMA*, 2002, 287, s. 1729–1738.
- Seeman, E. – Crans, G. G. – ez-Perez, A., et al.: Anti-vertebral fracture efficacy of raloxifene: a meta-analysis. *Osteoporos Int*, 2006, 17, s. 313–316.

- 11 **Black, D. M. – Cummings, S. R. – Karpf, D. B., et al.**: Randomised trial of effect of alendronate on risk of fracture in women with existing vertebral fractures. Fracture Intervention Trial Research Group. *Lancet*, 1996, 348, s. 1535–1541.
- 12 **Cummings, S. R. – Black, D. M. – Thompson, D. E., et al.**: Effect of alendronate on risk of fracture in women with low bone density but without vertebral fractures: results from the Fracture Intervention Trial. *JAMA*, 1998, 280, s. 2077–2082.
- 13 **Black, D. M. – Delmas, P. D. – Eastell, R., et al.**: HORIZON Pivotal Fracture Trial: once-yearly zoledronic acid for treatment of postmenopausal osteoporosis. *N Engl J Med*, 2007, 356, s. 1809–1822.
- 14 **Händel, M. N. – Cardoso, I. – von Bülow, C., et al.**: Fracture risk reduction and safety by osteoporosis treatment compared with placebo or active comparator in postmenopausal women: systematic review, network metaanalysis, and meta-regression analysis of randomised clinical trials. *BMJ*, 2023, 381, e068033.
- 15 **Khan, A. A. – Morrison, A. – Hanley, D.A.**: Diagnosis and management of osteonecrosis of the jaw: a systematic review and international consensus. *J Bone Miner Res*, 2015, 30, s. 3–23.
- 16 **Ayers, Ch. – Kansagara, D. – Lazur, B., et al.**: Effectiveness and safety of treatments to prevent fractures in people with low bone mass or primary osteoporosis: a living systematic review and network metaanalysis for the American College of Physicians. *Ann Intern Med*, 2023, 176, s. 182–195.
- 17 **Shane, E. – Burr, D., et al.**: Atypical subtrochanteric and diaphyseal femoral fractures: a second report of a task force of the American Society for Bone and Mineral Research. *J Bone Miner Res*, 2014, 29, s. 1–23.
- 18 **Meier, R. P. H. – Perneger, T. V. – Stern, R., et al.**: Increasing occurrence of atypical femoral fractures associated with bisphosphonate use. *Arch Intern Med*, 2012, 172, s. 930–936.
- 19 **Schilcher, J. – Michaëlsson, K. – Aspenberg, P.**: Bisphosphonate use and atypical fractures of the femoral shaft. *N Engl J Med*, 2011, 364, s. 1728–1737.
- 20 **O'Donnell, S. – Cranney, A. – Wells, G. A., et al.**: Strontium ranelate for preventing and treating postmenopausal osteoporosis. *Cochrane Database Syst Rev*, 2006, CD005326.
- 21 **Cummings, S. R. – San Martin, J. – McClung, M. R., et al.**: Denosumab for prevention of fractures in postmenopausal women with osteoporosis. *N Engl J Med*, 2009, 361, s. 756–765.
- 22 **Papapoulos, S., et al.**: Five years of denosumab exposure in women with postmenopausal osteoporosis: results from the first two years of the FREEDOM extension. *J Bone Miner Res*, 2012, 27, s. 694–701.
- 23 **Cosman, F. – Crittenden, D. B. – Adachi, J. D., et al.**: Romosozumab treatment in postmenopausal women with osteoporosis. *N Engl J Med*, 2016, 375, s. 1532–1543.
- 24 **Neer, R. M. – Arnaud, C. D. – Zanchetta, J. R., et al.**: Effect of parathyroid hormone (1–34) on fractures and bone mineral density in postmenopausal women with osteoporosis. *N Engl J Med*, 2001, 344, s. 1434–1441.
- 25 **Andrews, E. B. – Gilseman, A. W. – Midkiff, K., et al.**: The US post-marketing surveillance study of adult osteosarcoma and teriparatide: study design and findings from the first 7 years. *J Bone Miner Res*, 2012, 27, s. 2429–2437.
- 26 **Miller, P. D. – Hattersley, G. – Riis, B. J., et al.**: ACTIVE Study Investigators: Effect of abaloparatide vs placebo on new vertebral fractures in postmenopausal women with osteoporosis: a randomized clinical trial. *JAMA*, 2016, 316, s. 722–733.
- 27 **Saag, K. G. – Petersen, J. – Brandi, M. L., et al.**: Romosozumab or alendronate for fracture prevention in women with osteoporosis. *N Engl J Med*, 2017, 377, s. 1417–1427.
- 28 **EVENTY, preskripční informace dostupné z:** https://www.accessdata.fda.gov/drugsatfda_docs/label/2019/761062s000lbl.pdf, vyhledáno 15. 3. 2025.
- 29 **Leder, B. Z.**: Optimizing sequential and combined anabolic and antiresorptive osteoporosis therapy. *JBMR Plus*, 2018, 2, s. 62–68.
- 30 **Black, D. M. – Bilezikian, J. P. – Ensrud, K. E., et al.**: PaTH study investigators: One year of alendronate after one year of parathyroid hormone (1–84) for osteoporosis. *N Engl J Med*, 2005, 353, s. 555–565.
- 31 **Ensrud, K. E. – Schousboe, J. T.**: Anabolic therapy for osteoporosis. *JAMA*, 2021, 326, s. 350–351.
- 32 **Cosman, F. – Oates, M. – Betah, D., et al.**: Romosozumab followed by denosumab versus denosumab only: a post hoc analysis of FRAME and FRAME extension. *J Bone Miner Res*, 2024, 39, s. 1268–1277.
- 33 **Ayers, C. H. – Kansagara, D. – Lazur, B., et al.**: Effectiveness and safety of treatments to prevent fractures in people with low bone mass or primary osteoporosis: a living systematic review and network metaanalysis for the American College of Physicians. *Ann Intern Med*, 2023, 176, s. 182–195.