

Literatura ACTA MEDICINAE

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MUDr. Martina Spisarová, Ph.D. | MUDr. Anežka Zemánková | MUDr. Andrea Kopová | prof. MUDr. Bohuslav Melichar, Ph.D. |
doc. MUDr. Hana Študentová, Ph.D. Onkologická klinika, LF UP a FN Olomouc
- 3 **Studie PRIMED: prevence neutropenie a průjmů při terapii sacituzumab govitecanem u nemocných s metastatickým karcinomem prsu**
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- 3 **Zkušenost s adjuvantní léčbou osimertinibem**
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- 4 **Malabsorpce žlučových kyselin – nové možnosti diagnostiky a léčby**
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prof. MUDr. Darina Kohoutová, Ph.D. The Royal Marsden NHS Foundation Trust, London
- 5 **Pirtobrutinib v klinické praxi**
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- 5 **Dlouhodobá léčba ponatinibem**
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MUDr. David Buffa | MUDr. Ivo Demel | MUDr. Jaromír Gumulec Klinika hematoonkologie, Fakultní nemocnice Ostrava a LF Ostravské univerzity, Ostrava
- 5 **Definování selhání ruxolitinibu a přechod na další léčbu u nemocných s myelofibrózou: modifikovaná konsenzuální studie panelu DELPHI**
doc. MUDr. Jiří Slíva, Ph.D., MBA Ústav farmakologie, 3. LF UK, Praha
- 5 **Komentář k článku**
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- 6 **Momelotinib přínosem v léčbě nemocných s myelofibrózou**
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- 6 **Komentář k článku**
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- 6 **Febrilná neutropénia ako závažný vedľajší účinok systémovej protinádorovej liečby**
MUDr. Klaudia Šurmáneková AGEL Mammacentrum sv. Agáty a. s., Ambulancie klinickej onkológie, Banská Bystrica
- 7 **Kombinovaná liečba pacientů s autoimunitním syndromem (ITP, WAIHA, IBD, sarkoidóza)**
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- 7 **Deficit železa a anémie u pacientů s idiopatickými střevními záněty**
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- 7 **Sideropenická anémie – proč je důležité důsledné a kompletní vyšetření krevních ztrát**
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- 7 **Léčba nízké rizikové polycythaemia vera ropeginterferonem**
MUDr. Lucie Ulmanová Hematologicko-transfuzní oddělení, Oblastní nemocnice Mladá Boleslav, a. s.
- 7 **Úspěšná léčba refrakterní akutní myeloidní leukemie s mutací isocitrátdehydrogenázy 1 (IDH1) pomocí ivosidenibu, inhibitoru IDH1**
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- 7 **Elranatamab v léčbě relabujícího či refrakterního mnohočetného myelomu**
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- 8 **Recentní doporučení KDIGO pro léčbu glomerulonefritidy**
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Adjuvantní léčba pembrolizumabem u pacientů s karcinomem ledviny

MUDr. Martina Spisarová, Ph.D. | MUDr. Anežka Zemánková | MUDr. Andrea Kopová | prof. MUDr. Bohuslav Melichar, Ph.D. | doc. MUDr. Hana Študentová, Ph.D. Onkologická klinika, LF UP a FN Olomouc

- 1 Choueiri, T. K. – Tomczak, P. – Park, S. H., et al.: Adjuvant pembrolizumab after nephrectomy in renal-cell carcinoma. *N Engl J Med*, 2021, 385, s. 683–694.
- 2 Attiéh, F. – Boutros, M. – Kourie, H. R., et al.: Turning the tide: pembrolizumab's triumph in adjuvant RCC therapy. *Med Oncol*, 2024, 41, s. 242.
- 3 Choueiri, T. K. – Tomczak, P. – Park, S. H., et al.: Overall survival with adjuvant pembrolizumab in renal-cell carcinoma. *N Engl J Med*, 2024, 390, s. 1359–1371.
- 4 Choueiri, T. K. – Tomczak, P. – Park, S. H., et al.: Patient-reported outcomes in KEYNOTE-564: adjuvant pembrolizumab versus placebo for renal cell carcinoma. *Oncologist*, 2024, 29, s. 142–150.
- 5 Kiss, I.: Zhoibný novotvar ledviny (C64), 03/2025. Personalizovaná onkologie. Modrá kniha ČOS. MOÚ Brno. Dostupné z: <https://www.linkos.cz/lekar-a-multidisciplinari-tym/personalizovana-onkologie/modra-kniha-cos/aktualni-vydani-modre-knihy>, vyhledáno 23. 4. 2025.
- 6 Voss, M. H. – Motzer, R. J.: Adjuvant immunotherapy for kidney cancer – a new strategy with new challenges. *N Engl J Med*, 2024, 390, s. 1432–1433.
- 7 Voss, M. H. – Motzer, R. J.: Management of kidney cancer relapse to adjuvant pembrolizumab: early insights and questions for a newly emerging space. *Eur Urol*, 2024, 86, s. 513–515.
- 8 Şenbabaoğlu, Y. – Gejman, R. S. – Winer, A. G., et al.: Tumor immune microenvironment characterization in clear cell renal cell carcinoma identifies prognostic and immunotherapeutically relevant messenger RNA signatures. *Genome Biol*, 2016, 17, s. 231.
- 9 Kotani, D. – Oki, E. – Nakamura, Y., et al.: Molecular residual disease and efficacy of adjuvant chemotherapy in patients with colorectal cancer. *Nat Med*, 2023, 29, s. 127–134.
- 10 Powles, T. – Assaf, Z. J. – Davarpanah, N., et al.: ctDNA guiding adjuvant immunotherapy in urothelial carcinoma. *Nature*, 2021, 595, s. 432–437.
- 11 Furukawa, J. – Tomida, R. – Daizumoto, K., et al.: Advances in adjuvant therapy for renal cell carcinoma: perspectives on risk stratification and treatment outcomes. *Int J Urol*, 2025, 0, s. 1–10.

Studie PRIMED: prevence neutropenie a průmů při terapii sacituzumab govitecanem u nemocných s metastatickým karcinomem prsu

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- 1 Pérez-García, J. M., et al.: Prevention of sacituzumab govitecan (SG)-related neutropenia and diarrhea in patients (pts) with triple-negative or HR+/HER2- advanced breast cancer (ABC; PRIMED): A phase 2 trial. 2024 ASCO Annual Meeting. *J Clin Oncol*, 2024, 42, suppl., 1101.
- 2 Crawford, et al.: Reduction by granulocyte colony-stimulating factor of fever and neutropenia induced by chemotherapy in patients with small-cell lung cancer. *NEJM*, 1991, 325, s. 164–170.
- 3 Benson 3rd, A. B., et al.: Recommended guidelines for the treatment of cancer treatment-induced diarrhea. *J Clin Oncol*, 2004, 22, s. 2918–2926.
- 4 Bardia, A., et al.: Efficacy and safety of anti-trop-2 antibody drug conjugate sacituzumab govitecan (IMMU-132) in heavily pretreated patients with metastatic triple-negative breast cancer. *J Clin Oncol*, 2017, 35, s. 2141–2148.
- 5 Bardia, A., et al.: Sacituzumab govitecan in metastatic triple-negative breast cancer. *NEJM*, 2021, 384, s. 1529–1541.
- 6 Rugo, H. S., et al.: Sacituzumab govitecan in hormone receptor-positive/human epidermal growth factor receptor 2-negative metastatic breast cancer. *J Clin Oncol*, 2022, 40, s. 3375–3376.
- 7 Rugo, H. S., et al.: Overall survival with sacituzumab govitecan in hormone receptor-positive and human epidermal growth factor receptor 2-negative metastatic breast cancer (TROPICS-02): a randomised, open-label, multicentre, phase 3 trial. *Lancet*, 2023, 402, s. 1423–1433.

Zkušenost s adjuvantní léčbou osimertinibem

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- 1 Wu, Y.-L. – Herbst, R. S. – Mann, H., et al.: ADAURA: phase III, double-blind, randomized study of osimertinib versus placebo in EGFR mutation-positive early-stage NSCLC after complete surgical resection. *Clin Lung Cancer*, 2018, 19, s. e533–e536.
- 2 Herbst, R. S. – Wu, Y.-L. – John, T., et al.: Adjuvant osimertinib for resected EGFR-mutated stage IB-IIIa non-small-cell lung cancer: updated results from the phase III randomized ADAURA trial. *J Clin Oncol*, 2023, 41, s. 1830–1840.
- 3 Tsuboi M. – Herbst, R. S. – John, T., et al.: ADAURA Investigators: Overall survival with osimertinib in resected EGFR-mutated NSCLC. *N Engl J Med*, 2023, 389, s. 137–147.
- 4 SPC Tagrisso. Dostupné z: https://www.ema.europa.eu/cs/documents/product-information/tagrisso-epar-product-information_cs.pdf, vyhledáno 24. 4. 2025.
- 5 Sobin, L. H. – Gospodarowicz, M. K. – Wittekind, Ch. (eds.): Klasifikace zhoubných novotvarů. UICC – International Union Against Cancer. Wiley-Blackwell. 7. vydání, 2009; česká verze 2011. Dostupné z: https://www.wikiskripta.eu/images/c/ca/TNM_Klasifikace_zhoubn%C3%BDch_novotvar%C5%AF.pdf, vyhledáno 24. 4. 2025.
- 6 Tsuboi, M. – Herbst, R. S. – John, T., et al.: Overall survival with osimertinib in resected EGFR-mutated NSCLC. *N Engl J Med*, 2023, 389, s. 137–147.

Pacient s multiplicitním nádorovým postižením a závažnou tromboembolickou příhodou

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- 1 Kiss, I. (ed.): Modrá kniha ČOS. MOÚ Brno, 2025, kap. 27. Dostupné z: <https://www.linkos.cz/lekar-a-multidisciplinari-tym/personalizovana-onkologie/modra-kniha-cos/aktualni-vydani-modre-knihy>, vyhledáno 24. 4. 2025.
- 2 Tesařová, P. – Karetová, D. – Hirmerová, J., et al.: Prevence, diagnostika a léčba trombózy spojené se zhoubným nádorem. *Transfuzie Hematol dneš*, 2023, 29, s. 61–67.
- 3 Key, N. S. – Khorana, A. A. – Kuderer, N. M., et al.: Venous thromboembolism prophylaxis and treatment in patients with cancer: ASCO guideline update. *J Clin Oncol*, 2023, 41, s. 3063–3071.
- 4 Lee, A. Y. – Levine, M. N. – Baker, R. L., et al.: Randomized Comparison of Low-Molecular-Weight Heparin versus Oral Anticoagulant Therapy for the Prevention of Recurrent Venous Thromboembolism in Patients with Cancer (CLOT) Investigators: Low-molecular-weight heparin versus a coumarin for the prevention of recurrent venous thromboembolism in patients with cancer. *N Engl J Med*, 2003, 349, s. 146–153.

Peglyovaný lipozomální irinotekan (Onivyde) v léčbě metastazujícího adenokarcinomu pankreatu

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- 1 Conroy, T., et al.: FOLFIRINOX versus gemcitabine for metastatic pancreatic cancer. *N Engl J Med*, 2011, 364, s. 1817–1825.
- 2 Von Hoff, D. D., et al.: Increased survival in pancreatic cancer with nab-paclitaxel plus gemcitabine. *N Engl J Med*, 2013, 369, s. 1691–1703.
- 3 Wang-Gillam, A., et al.: Nanoliposomal irinotecan with fluorouracil and folinic acid in metastatic pancreatic cancer after previous gemcitabine-based therapy (NAPOLI-1): a global, randomised, open-label, phase 3 trial. *Lancet*, 2016, 387, s. 545–557.
- 4 Wang-Gillam, A., et al.: NAPOLI-1 phase 3 study of liposomal irinotecan in metastatic pancreatic cancer: Final overall survival analysis and characteristics of long-term survivors. *Eur J Cancer*, 2019, 108, s. 78–87.
- 5 Wainberg, Z. V., et al.: NALIRIFOX versus nab-paclitaxel and gemcitabine in treatment-naïve patients with metastatic pancreatic ductal adenocarcinoma (NAPOLI 3): a randomised, open-label, phase 3 trial. *Lancet*, 2023, 402, s. 1272–1281.
- 6 American Cancer Society – Cancer Facts and Figures 2025, www.cancer.org.
- 7 International Agency for Research on Cancer. WHO: Cancer Tomorrow. Dostupné z: https://gco.iarc.who.int/tomorrow/en/dataviz/trends?multiple_populations=1&cancers=13, vyhledáno 25. 4. 2025.
- 8 Springfield, C., et al.: Neoadjuvant therapy for pancreatic cancer. *Nat Rev Clin Oncol*, 2023, 20, s. 318–337.
- 9 Merza, N., et al.: FOLFIRINOX vs. gemcitabine + nab-paclitaxel as the first-line treatment for pancreatic cancer: a systematic review and meta-analysis. *World J Oncol*, 2023, 14, s. 325–339.
- 10 Fukahori, M., et al.: Efficacy of second-line chemotherapy after treatment with gemcitabine plus nab-paclitaxel or FOLFIRINOX in patients with metastatic pancreatic cancer. *Sci Rep*, 2023, 13, 19399.
- 11 Knox, J. J. – Jaffee, E. M. – O'Kane, G. M., et al.: PASS-01: Pancreatic adenocarcinoma signature stratification for treatment–01. *Pancreatic Cancer*, 2022, dostupné z: https://doi.org/10.1200/JCO.2022.40.4_suppl.TPS635, vyhledáno 26. 4. 2025.
- 12 Pusceddu, S. – Ghidini, M. – Torchio, M., et al.: Comparative effectiveness of gemcitabine plus nab-paclitaxel and FOLFIRINOX in the first-line setting of metastatic pancreatic cancer: a systematic review and meta-analysis. *Cancers*, 2019, 11, 484.
- 13 Ohba, A., et al.: 16160 – Nab-paclitaxel plus gemcitabine versus modified FOLFIRINOX or S-IROX in metastatic or recurrent

- pancreatic cancer (JCOG1611, GENERATE): a multicenter, randomized, open-label, three-arm, phase 2/3 trial. *Ann Oncol*, 2023, 34, suppl. 2, s. S895–S924.
- 14 Yoo, C., et al.: 255P Real-world outcomes of long-term survivors of metastatic pancreatic ductal adenocarcinoma (mPDAC) previously treated with liposomal irinotecan (nal-IRI) for the Asian cohort of NALLONG study. *Ann Oncol*, 2024, 35, s. 1498–1499.
- 15 Onivyde pegylated liposomal (previously Onivyde). Dostupné z: <https://www.ema.europa.eu/en/medicines/human/EPAR/onivyde-pegylated-liposomal>, vyhledáno 25. 4. 2025.
- 16 Dostupné z: <https://www.onivyde.com/en-us/hcp/treatment-information/how-onivyde-works/liposomal-technology>, vyhledáno 25. 4. 2025.

Lenvatinib v léčbě hepatocelulárního karcinomu – data z reálné praxe

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- Sung, H. – Ferlay, J. – Siegel, R. L., et al.: Global Cancer Statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin*, 2021, 71, s. 209–249.
- Tabrizian, P. – Abdelrahim, M. – Schwartz, M.: Immunotherapy and transplantation for hepatocellular carcinoma. *J Hepatol*, 2024, 80, s. 822–825.
- Singal, A. G. – Kanwal, F. – Llovet, J. M.: Global trends in hepatocellular carcinoma epidemiology: implications for screening, prevention and therapy. *Nat Rev Clin Oncol*, 2023, 20, s. 864–884.
- Yang, J. D. – Hainaut, P. – Gores, G. J., et al.: A global view of hepatocellular carcinoma: trends, risk, prevention and management. *Nat Rev Gastroenterol Hepatol*, 2019, 16, s. 589–604.
- Brown, Z. J. – Tsilimigras, D. I. – Ruff, S. M., et al.: Management of hepatocellular carcinoma: a review. *JAMA Surg*, 2023, 158, s. 410–420.
- Huang, A. – Yang, X. R. – Chung, W. Y., et al.: Targeted therapy for hepatocellular carcinoma. *Sig Transduct Target Ther*, 2020, 5, s. 146.
- Wu, T. K.-H. – Hui, R. W.-H. – Mak, L.-Y., et al.: Hepatocellular carcinoma: Advances in systemic therapies [version 2; peer review: 3 approved]. *F1000Research*, 2024, 13, s. 104.
- Liu, Y.-T. – Mao, Z.-W. – Ding, Y., et al.: Macrophages as targets in hepatocellular carcinoma therapy. *Mol Cancer Ther*, 2024, 23, s. 780–790.
- Cao, L.-Q. – Xie, Y. – Fleishman, J. S., et al.: Hepatocellular carcinoma and lipid metabolism: Novel targets and therapeutic strategies. *Cancer Lett*, 2024, 597, 217061.
- Llovet, J. M. – Ricci, S. – Mazzaferro, V., et al.: Sorafenib in advanced hepatocellular carcinoma. *N Engl J Med*, 2008, 359, s. 378–390.
- Kudo, M. – Finn, R. S. – Qin, S., et al.: Lenvatinib versus sorafenib in first-line treatment of patients with unresectable hepatocellular carcinoma: a randomised phase 3 non-inferiority trial. *Lancet*, 2018, 391, s. 1163–1173.
- Al-Salama, Z. T. – Syed, Y. Y. – Scott, L. J.: Lenvatinib: a review in hepatocellular carcinoma. *Drugs*, 2019, 79, s. 665–674.
- Villanueva, A.: Hepatocellular carcinoma. *N Engl J Med*, 2019, 380, s. 1450–1462.

Malabsorpce žlučových kyselin – nové možnosti diagnostiky a léčby

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- Camilleri, M. – Vijayvargiya, P.: The Role of Bile Acids in Chronic Diarrhea. *Am J Gastroenterol*. 2020; 115(10): 1596–1603. doi: 10.14309/ajg.0000000000000696.
- Kohoutová, D.: Malabsorpce žlučových kyselin (p. 1485–1489). In: Zavoral, M. – Bureš, J. – Ryska, M. – Urban, O. – Urbánek, P. – Válek, V. (eds.): *Mařatková gastroenterologie*. Praha: Karolinum, 2021; ISBN 978-80-246-5002-9.
- Marasco, G. – Cremon, C. – Barbaro, M. R., et al.: Pathophysiology and Clinical Management of Bile Acid Diarrhea. *J Clin Med*. 2022; 11(11): 3102. doi: 10.3390/jcm11113102.
- Wang, Y. – Xu, H. – Zhou, X., et al.: Dysregulated bile acid homeostasis: unveiling its role in metabolic diseases. *Med Rev*. 2024; 4(4): 262–283. doi: 10.1515/mr-2024-0020.
- Calzadilla, N. – Comiskey, S. M. – Dudeja, P. K., et al.: Bile acids as inflammatory mediators and modulators of intestinal permeability. *Front Immunol*. 2022; 13: 1021924. doi: 10.3389/fimmu.2022.1021924.
- Di Ciaula, A. – Khalil, M. – Baffy, G. – Portincasa, P.: Advances in the pathophysiology, diagnosis and management of chronic diarrhoea from bile acid malabsorption: a systematic review. *Eur J Intern Med*. 2024; 128: 10–19. doi: 10.1016/j.ejim.2024.07.008.
- Kohoutová, D. – Zogala, D. – Doležal, J. – Lang, O. – Bureš, J.: Malabsorpce žlučových kyselin u onkologických pacientů. *Gastroenterol Hepatol*. 2022; 76(5): 399–408. doi: 10.48095/ccgh2022399.
- Slattery, S. A. – Niaz, O. – Aziz, Q., et al.: Systematic review with meta-analysis: the prevalence of bile acid malabsorption in the irritable bowel syndrome with diarrhoea. *Aliment Pharmacol Ther*. 2015; 42(1): 3–11. doi: 10.1111/apt.13227.
- Sciumè, G. D. – Berti, G. – Lambiase, C., et al.: Misinterpreting Diarrhea-Predominant Irritable Bowel Syndrome and Functional Diarrhea: Pathophysiological Highlights. *J Clin Med*. 2023; 12(18): 5787. doi: 10.3390/jcm12185787.
- Lenicek, M. – Duricova, D. – Komarek, V., et al.: Bile acid malabsorption in inflammatory bowel disease: assessment by serum markers. *Inflamm Bowel Dis*. 2011; 17(6): 1322–1327. doi: 10.1002/ibd.21502.
- Battat, R. – Kandi, S. – Lacerda, A. P., et al.: Association of Bile Acid Diarrhea with Symptoms and Disease Activity in Crohn's Disease: Post-Hoc Clinical Trial Analysis of Serum 7 α -hydroxy-4cholesteron-3-one, C4, in Patients with Active Crohn's Disease. *J Crohns Colitis*. 2025; jjafo53. doi: 10.1093/ecco-jcc/jjafo53.
- Gadhok, R. – Paulon, E. – Tai, C., et al.: Gastrointestinal consequences of cancer treatment: evaluation of 10 years' experience at a tertiary UK centre. *Frontline Gastroenterol*. 2020; 12(6): 471–477. doi: 10.1136/flgastro-2020-101430.
- Kohoutová, D. – Worku, D. – Aziz, H., et al.: Malignant Melanoma of the Gastrointestinal Tract: Symptoms, Diagnosis, and Current Treatment Options. *Cells*. 2021; 10(2): 327.
- Gee, C. – Fleuret, C. – Wilson, A. – Levine, D. – Elhusseiny, R. – Muls, A. – Cunningham, D. – Kohoutová, D.: Bile Acid Malabsorption as a Consequence of Cancer Treatment: Prevalence and Management in the National Leading Centres. *Cancers (Basel)*. 2021; 13(24): 6213. doi: 10.3390/cancers13246213.
- Kohoutová, D. – Gee, C. – Fleuret, C., et al.: Bile acid malabsorption as a consequence of cancer treatment: prevalence and management in the national leading centre. *UEG J*. 2021; 9(8): 207.
- Walters, J. R. F. – Arasaradnam, R. – Andreyev, H. J. N.: UK Bile Acid Related Diarrhoea Network: Diagnosis and management of bile acid diarrhoea: a survey of UK expert opinion and practice. *Frontline Gastroenterol*. 2019; 11(5): 358–363. doi: 10.1136/flgastro-2019-101301.
- Habba, S. F.: Chronic diarrhea: identifying a new syndrome. *Am J Gastroenterol*. 2000; 95(8): 2140–2141. doi: 10.1111/j.1572-0241.2000.02219.x.
- Appleby, R. N. – Moghul, I. – Khan, S., et al.: Non-alcoholic fatty liver disease is associated with dysregulated bile acid synthesis and diarrhea: A prospective observational study. *PLoS One*. 2019; 14(1): e0211348. doi: 10.1371/journal.pone.0211348.
- Lytakov, I. – Ursini, F. – Penchev, P., et al.: Methods for diagnosing bile acid malabsorption: a systematic review. *BMC Gastroenterol*. 2019; 19(1): 185. doi: 10.1186/s12876-019-1102-1.
- Vulsteke, F. – De Gerssem, R. – Arts, J., et al.: Bile acid malabsorption investigated by selenium-75-homocholic acid taurine (75SeHCAT) scans, a retrospective single-centre experience. *Acta Gastroenterol Belg*. 2024; 87(3): 381–387. doi: 10.51821/87.3.13036.
- Notghi, A. – James, G. – O'Brien, J., et al.: British Nuclear Medicine Society SeHCAT guidelines. *Nucl Med Commun*. 2024; 45(7): 564–572. doi: 10.1097/MNM.0000000000001854.
- Lenicek, M. – Duricova, D. – Komarek, V., et al.: Bile acid malabsorption in inflammatory bowel disease: assessment by serum markers. *Inflamm Bowel Dis*. 2011; 17(6): 1322–1327. doi: 10.1002/ibd.21502.
- Vijayvargiya, P. – Camilleri, M. – Shin, A. – Saenger, A.: Methods for diagnosis of bile acid malabsorption in clinical practice. *Clin Gastroenterol Hepatol*. 2013; 11(10): 1232–1239. doi: 10.1016/j.cgh.2013.04.029.
- Vitek, L.: Bile acid malabsorption in inflammatory bowel disease. *Inflamm Bowel Dis*. 2015; 21(2): 476–83. doi: 10.1097/MIB.0000000000000193. PMID: 25248001.
- Farrugia, A. – Williams, N. – Khan, S., et al.: Bile acid diarrhoea and metabolic changes after cholecystectomy: a prospective case-control study. *BMC Gastroenterol*. 2024; 24(1): 282. doi: 10.1186/s12876-024-03368-8.
- Bureš, J. – Kohoutová, D. – Zavoral, M.: Gastrointestinal toxicity of systemic oncology immunotherapy. *Klin Onkol*. 2022; 35(5): 346–357. doi: 10.48095/ccko2022346.
- McKenzie, Y. A. – Sremanakova, J. – Todd, C., et al.: Effectiveness of diet, psychological, and exercise therapies for the management of bile acid diarrhoea in adults: A systematic review. *J Hum Nutr Diet*. 2022; 35(6): 1087–1104. doi: 10.1111/jhn.13005.
- Walters, J. R. F. – Sikafo, R.: Managing bile acid diarrhea: aspects of contention. *Expert Rev Gastroenterol Hepatol*. 2024; 18(9): 521–528. doi: 10.1080/17474124.2024.2402353.
- Wilcox, C. – Turner, J. – Green, J.: Systematic review: the management of chronic diarrhoea due to bile acid malabsorption. *Aliment Pharmacol Ther*. 2014; 39(9): 923–939. doi: 10.1111/apt.12684.
- Liu, H. – Lu, M. – Hu, J., et al.: Medications and Food Interfering with the Bioavailability of Levothyroxine: A Systematic Review. *Ther Clin Risk Manag*. 2023; 19: 503–523. doi: 10.2147/TCRM.S414460.

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- 1 Armitage, J. O. – Longo, D. L.: Mantle-cell lymphoma. *N Engl J Med*, 2022, 386, s. 2495–2506.
- 2 Chudej, J. – Ladická, M.: Výskyt lymfómu z pláštových buniek (MCL) na Slovensku v roku 2021. Dostupné z: http://www.hematology.sk/docs/Epidemiologia%20MCL%202021_09.2021.pdf, vyhladáno 23. 4. 2025.
- 3 Navarro, A. – Beà, S. – Jares, P., et al.: Molecular pathogenesis of mantle cell lymphoma. *Hematol Oncol Clin North Am*, 2020, 34, s. 795–807.
- 4 Silkenstedt, E. – Linton, K. – Dreyling, M.: Mantle cell lymphoma – advances in molecular biology, prognostication and treatment approaches. *Br J Haematol*, 2021, 195, s. 162–173.
- 5 Eyre, T. A. – Cheah, C. Y. – Wang, M. L.: Therapeutic options for relapsed/refractory mantle cell lymphoma. *Blood*, 2022, 139, s. 666–677.
- 6 Zelenetz, A. D. – Gordon, L. I. – Abramson, J. S., et al.: NCCN Guidelines Insights: B-Cell Lymphomas. Version 2.2025. *J Natl Compr Canc Netw*, 2025, 23, s. 1–341.
- 7 Barr, P. M. – Owen, C. – Robak, T., et al.: Up to 8-year follow-up from RESONATE-2: first-line ibrutinib treatment for patients with chronic lymphocytic leukemia. *Blood Adv*, 2022, 6, s. 3440–3450.
- 8 Liu, L. – Shi, B. – Wang, X. – Xiang, H.: Strategies to overcome resistance mutations of Bruton's tyrosine kinase inhibitor ibrutinib. *Future Med Chem*, 2018, 10, s. 343–356.
- 9 Thompson, P. A. – Tam, C. S.: Pirtobrutinib: a new hope for patients with BTK inhibitor-refractory lymphoproliferative disorders. *Blood*, 2023, 141, s. 3137–3142.
- 10 Gomez, E. B. – Ebata, K. – Randeria, H. S., et al.: Preclinical characterization of pirtobrutinib, a highly selective, noncovalent (reversible) BTK inhibitor. *Blood*, 2023, 142, s. 62–72.
- 11 EMA. SPC lieku JAYPIRCA. [cit. 2025-APR-23]. Dostupné z: <https://www.ema.europa.eu/en/medicines/human/EPAR/jaypirca>, vyhladáno 23. 4. 2025.
- 12 Cohen, J. B. – Shah, N. N. – Jurczak, W., et al.: Pirtobrutinib in relapsed/refractory (R/R) mantle cell lymphoma (MCL) patients with prior cBTKi: safety and efficacy including high-risk subgroup analyses from the phase 1/2 BRUIN study. *Blood*, 2023, 142, suppl. 1, 981.

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- 1 Mughal, T. I. – Radich, J. P. – Deininger, M. W., et al.: Chronic myeloid leukemia: reminiscences and dreams. *Haematologica*, 2016, 101, s. 541–558.
- 2 Cortes, J. E. – Kim, D. W. – Pinila Ibraiz, J., et al.: Ponatinib efficacy and safety in Philadelphia chromosome positive leukemia: final 5 year results of the phase 2 PACE trial. *Blood*, 2018, 132, s. 393–404.
- 3 Čičátková, P. – Záchová, D. – Hornák, T., et al.: Cévná nežádoucí účinky u pacientů s chronickou myeloidní leukémií při terapii inhibitory tyrosin kináz v každodenní klinické praxi – analýza z databáze INFINITY. *Transfúze Hematol Dnes*, 2023, 29, s. 29–37.
- 4 Cortes, J. – Apperley, J. – Lomaia, E., et al.: Ponatinib dose ranging study in chronic-phase chronic myeloid leukemia: a randomized, open-label phase 2 clinical trial. *Blood*, 2021, 138, s. 2042–2050.

Eltrombopag v terapii hypoplastické myelodysplastické neoplazie

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- 1 Khoury, J. D. – Solary, E. – Abla, O., et al.: The 5th edition of the World Health Organization Classification of haematolymphoid tumours: myeloid and histiocytic/dendritic neoplasms. *Leukemia*, 2022, 36, s. 1703–1719.
- 2 Vicente, A., et al.: Eltrombopag monotherapy can improve hematopoiesis in patients with low to intermediate risk-1 myelodysplastic syndrome. *Haematologica*, 2020, 105, s. 2785–2794.
- 3 Carver-Moore, K. – Broxmeyer, H. E. – Luoh, S. M., et al.: Low levels of erythroid and myeloid progenitors in thrombopoietin- and c-mpl-deficient mice. *Blood*, 1996, 88, s. 803–808.
- 4 Kimura, S. – Roberts, A. W. – Metcalf, D., et al.: Hematopoietic stem cell deficiencies in mice lacking c-Mpl, the receptor for thrombopoietin. *Proc Natl Acad Sci U S A*, 1998, 95, s. 1195–1200.

Definování selhání ruxolitinu a přechod na další léčbu u nemocných s myelofibrózou: modifikovaná konsenzuální studie panelu DELPHI

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- 1 Tefferi, A.: Primary myelofibrosis: 2019 update on diagnosis, risk-stratification and management. *Am J Hematol*, 2018, 93, s. 1551–1560.
- 2 Mesa, R. – Miller, C. B. – Thyne, M., et al.: Myeloproliferative neoplasms (MPNs) have a significant impact on patients' overall health and productivity: the MPN Landmark survey. *BMC Cancer*, 2016, 16, s. 167.
- 3 Kröger, N. – Giorgino, T. – Scott, B. L., et al.: Impact of allogeneic stem cell transplantation on survival of patients less than 65 years of age with primary myelofibrosis. *Blood*, 2015, 125, s. 3347–3350; quiz 3364.
- 4 Verstovsek, S. – Mesa, R. A. – Gotlib, J., et al.: Long-term treatment with ruxitinib for patients with myelofibrosis: 5-year update from the randomized, double-blind, placebo-controlled, phase 3 COMFORT-I trial. *J Hematol Oncol*, 2017, 10, s. 55.
- 5 Harrison, C. N. – Vannucchi, A. M. – Kiladjian, J. J., et al.: Long-term findings from COMFORT-II, a phase 3 study of ruxitinib vs best available therapy for myelofibrosis. *Leukemia*, 2016, 30, s. 1701–1707.
- 6 Harrison, C. N. – Schaap, N. – Vannucchi, A. M., et al.: Fedratinib improves myelofibrosis-related symptoms and health-related quality of life in patients with myelofibrosis previously treated with ruxitinib: patient-reported outcomes from the phase II JAKARTA2 trial. *Hemaphere*, 2021, 5, s. e562.
- 7 Mascarenhas, J. – Hoffman, R. – Talpaz, M., et al.: Pacritinib vs best available therapy, including ruxitinib, in patients with myelofibrosis: a randomized clinical trial. *JAMA Oncol*, 2018, 4, s. 652–659.
- 8 Mascarenhas, J. – Nguyen, H. – Saunders, A., et al.: Defining ruxitinib failure and transition to next-line therapy for patients with myelofibrosis: a modified Delphi panel consensus study. *Future Oncol*, 2023, 19, s. 763–773.
- 9 Tefferi, A. – Cervantes, F. – Mesa, R., et al.: Revised response criteria for myelofibrosis: International Working Group-Myeloproliferative Neoplasms Research and Treatment (IWG-MRT) and European LeukemiaNet (ELN) consensus report. *Blood*, 2013, 122, s. 1395–1398.
- 10 Emanuel, R. M. – Dueck, A. C. – Geyer, H. L., et al.: Myeloproliferative neoplasm (MPN) symptom assessment form total symptom score: prospective international assessment of an abbreviated symptom burden scoring system among patients with MPNs. *J Clin Oncol*, 2012, 30, s. 4098–4103.
- 11 Song, M. K. – Park, B. B. – Uhm, J. E.: Understanding splenomegaly in myelofibrosis: association with molecular pathogenesis. *Int J Mol Sci*, 2018, 19, s. 898.
- 12 Tefferi, A. – Pardanani, A.: Serious adverse events during ruxitinib treatment discontinuation in patients with myelofibrosis. *Mayo Clin Proc*, 2011, 86, s. 1188–1191.
- 13 Mesa, R. – Verstovsek, S. – Platzbecker, U., et al.: Clinical outcomes of patients with myelofibrosis after immediate transition to momelotinib from ruxitinib. *Haematologica*, 2024, 109, s. 676–681.

Komentář k článku

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- 1 Tefferi, A. – Cervantes, F. – Mesa, R., et al.: Revised response criteria for myelofibrosis: International Working Group-Myeloproliferative Neoplasms Research and Treatment (IWG-MRT) and European LeukemiaNet (ELN) consensus report. *Blood*, 2013, 122, s. 1395–1398.
- 2 Scherber, R. – Dueck, A. C. – Johansson, P., et al.: The Myeloproliferative Neoplasm Symptom Assessment Form (MPN-SAF): international prospective validation and reliability trial in 402 patients. *Blood*, 2011, 118, s. 401–408.
- 3 The NCCN Guidelines 2024 for the diagnosis of myeloproliferative neoplasms and the risk stratification, management, and supportive care relevant to myelofibrosis.
- 4 Maffioli, M. – Mora, B. – Ball, S., et al.: A prognostic model to predict survival after 6 months of ruxitinib in patients with myelofibrosis. *Blood Adv*, 2022, 6, s. 1855–1864.
- 5 Mascarenhas, J. – Mehra, M. – He, J., et al.: Patient characteristics and outcomes after ruxitinib discontinuation in patients with myelofibrosis. *J Med Econ*, 2020, 23, s. 721–727.
- 6 Bose, P. – Kuykendall, A. T. – Miller, C., et al.: Moving beyond ruxitinib failure in myelofibrosis: evolving strategies for second line therapy. *Expert Opin Pharmacother*, 2023, 24, s. 1091–1100.
- 7 Harrison, C. N. – Schaap, N. – Vannucchi, A. M., et al.: Fedratinib

- in patients with myelofibrosis previously treated with ruxolitinib: an updated analysis of the JAKARTA2 study using stringent criteria for ruxolitinib failure. *Am J Hematol*, 2020, 95, s. 594–603.
- 8 Gupta, V. – Yacoub A. – Mesa, R. A., et al.: Safety and efficacy of fedratinib in patients with myelofibrosis previously treated with ruxolitinib: primary analysis of FREEDOM trial. *Leuk Lymphoma*, 2024, 65, s. 1314–1324.
 - 9 Mascarenhas, J. – Harrison, C. – Schuler, T. A., et al.: Real-world use of fedratinib for myelofibrosis following prior ruxolitinib failure: patient characteristics, treatment patterns, and clinical outcomes. *Clin Lymphoma Myeloma Leuk*, 2024, 24, s. 122–132.
 - 10 Mascarenhas, J. – Hoffman, R. – Talpaz, M., et al.: Pacritinib vs best available therapy, including ruxolitinib, in patients with myelofibrosis: a randomized clinical trial. *JAMA Oncol*, 2018, 4, s. 652–659.
 - 11 Harrison, C. N. – Vannucchi, A. M. – Platzbecker, U., et al.: Momelotinib versus best available therapy in patients with myelofibrosis previously treated with ruxolitinib (SIMPLIFY 2): a randomised, open-label, phase 3 trial. *Lancet Haematol*, 2018, 5, s. e73–e81.
 - 12 Chifotides, H. T. – Bose, P. – Verstovsek, S.: Momelotinib: an emerging treatment for myelofibrosis patients with anemia. *J Hematol Oncol*, 2022, 15, 7.
 - 13 Verstovsek, S. – Gerds, A. T. – Vannucchi, A. M., et al.: Momelotinib versus danazol in symptomatic patients with anaemia and myelofibrosis (MOMENTUM): results from an international, double-blind, randomised, controlled, phase 3 study. *Lancet*, 2023, 401, s. 269–280.
 - 14 O'Sullivan, J. – Omerdeen, I. – Psaila, B.: When, which and how to switch: navigating JAK inhibitors in myelofibrosis. *Br J Haematol*, 2024, doi: 10.1111/bjh.19929.
 - 15 Arnall, J. – Lyle, L. – Moore, D.: Advances in myelofibrosis management: new Janus kinase inhibitors beyond ruxolitinib. *J Adv Pract Oncol*, 2024, doi: 10.6004/jadpro.2024.15.8.6.

Momelotinib přínosem v léčbě nemocných s myelofibrózou

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- 1 Oh, S. T. – Talpaz, M. – Gerds, A. T., et al.: ACVR1/JAK1/JAK2 inhibitor momelotinib reverses transfusion dependency and suppresses hepatic in myelofibrosis phase 2 trial. *Blood Adv*, 2020, 4, s. 4282–4291.
- 2 Pardanani, A. – Gotlib, J. – Roberts, A. W., et al.: Long-term efficacy and safety of momelotinib, a JAK1 and JAK2 inhibitor, for the treatment of myelofibrosis. *Leukemia*, 2018, 32, s. 1035–1038.
- 3 Mesa, R. A. – Kiladjian, J. J. – Catalano, J. V., et al.: SIMPLIFY-1: a phase III randomized trial of momelotinib versus ruxolitinib in Janus kinase inhibitor-naïve patients with myelofibrosis. *J Clin Oncol*, 2017, 35, s. 3844–3850.
- 4 Mesa, R. – Oh, S. T. – Gerds, A. T., et al.: Momelotinib reduces transfusion requirements in patients with myelofibrosis. *Leuk Lymphoma*, 2022, 63, s. 1718–1722.
- 5 Mesa, R. – Verstovsek, S. – Platzbecker, U., et al.: Clinical outcomes of patients with myelofibrosis after immediate transition to momelotinib from ruxolitinib. *Haematologica*, 2024, 109, s. 676–681.
- 6 Mesa, R. – Harrison, C. – Oh, S. T., et al.: Overall survival in the SIMPLIFY-1 and SIMPLIFY-2 phase 3 trials of momelotinib in patients with myelofibrosis. *Leukemia*, 2022, 36, s. 2261–2268.
- 7 Harrison, C. N. – Vannucchi, A. M. – Platzbecker, U., et al.: Momelotinib versus best available therapy in patients with myelofibrosis previously treated with ruxolitinib (SIMPLIFY 2): a randomised, open-label, phase 3 trial. *Lancet Haematol*, 2018, 5, s. e73–e81.
- 8 Gerds, A. T. – Verstovsek, S. – Vannucchi, A. M., et al.: Momelotinib versus danazol in symptomatic patients with anaemia and myelofibrosis previously treated with a JAK inhibitor (MOMENTUM): an updated analysis of an international, double-blind, randomised phase 3 study. *Lancet Haematol*, 2023, 10, s. e735–e746.
- 9 Verstovsek, S. – Gerds, A. T. – Vannucchi, A. M., et al.: Momelotinib versus danazol in symptomatic patients with anaemia and myelofibrosis (MOMENTUM): results from an international, double-blind, randomised, controlled, phase 3 study. *Lancet*, 2023, 401, s. 269–280.
- 10 Verstovsek, S. – Mesa, R. – Gupta, V., et al.: Momelotinib long-term safety and survival in myelofibrosis: integrated analysis of phase 3 randomized controlled trials. *Blood Adv*, 2023, 7, s. 3582–3591.
- 11 O'Sullivan, J. – Omerdeen, I. – Psaila, B.: When, which and how to switch: Navigating JAK inhibitors in myelofibrosis. *Br J Haematol*, 2024, doi: 10.1111/bjh.19929.

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- 1 Harrison, C. N. – Vannucchi, A. M. – Platzbecker, U., et al.: Momelotinib versus best available therapy in patients with myelofibrosis previously treated with ruxolitinib (SIMPLIFY 2): a randomised, open-label, phase 3 trial. *Lancet Haematol*, 2018, 5, s. e73–e81.
- 2 Tefferi, A. – Guglielmelli, P. – Larson, D. R., et al.: Long-term survival and blast transformation in molecularly annotated essential thrombocythemia, polycythemia vera, and myelofibrosis. *Blood*, 2014, 124, s. 2507–2513.
- 3 Tefferi, A., et al.: Momelotinib therapy for myelofibrosis: a 7-year follow-up. *Blood Cancer J*, 2018, 8, s. 29.
- 4 Bose, P., et al.: Moving beyond ruxolitinib failure in myelofibrosis: evolving strategies for second line therapy. *Expert Opinion Pharmacother*, 2023, 24, s. 1091–1100.
- 5 Nicolosi, M., et al.: Sex and degree of severity influence the prognostic impact of anemia in primary myelofibrosis: analysis based on 1109 consecutive patients. *Leukemia*, 2018, 32, s. 1254–1258.
- 6 Verstovsek, S., et al.: Momelotinib versus danazol in symptomatic patients with anaemia and myelofibrosis (MOMENTUM): results from an international, double-blind, randomised, controlled, phase 3 study. *Lancet*, 2023, 401, s. 269–280.
- 7 Mesa, R., et al.: Clinical outcomes of patients with myelofibrosis after immediate transition to momelotinib from ruxolitinib. *Haematologica*, 2024, 109, s. 676–681.
- 8 Koschmieder, S., et al.: Myelofibrosis management in routine clinical practice with a focus on patients with cytopenias: recommendations from a global consensus group. *Leukemia*, 2024, 38, 1831–1838.
- 9 Bose, P.: Momelotinib for the treatment of myelofibrosis. Online. *Blood*, 2024, 144, s. 708–713.
- 10 Harrison, C. N., et al.: Momelotinib versus continued ruxolitinib or best available therapy in JAK inhibitor-experienced patients with myelofibrosis and anemia: subgroup analysis of SIMPLIFY-2. *Adv Ther*, 2024, 41, s. 3722–3735.
- 11 NCCN Guidelines. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines) are posted with the latest update date and version number. Dostupné z: https://www.nccn.org/guidelines/category_1, vyhledáno 23. 4. 2025.

Febrilná neutropénia ako závažný vedľajší účinok systémovej protinádorovej liečby

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- 1 Lalami, Y. – Klastersky, J.: Impact of chemotherapy-induced neutropenia (CIN) and febrile neutropenia (FN) on cancer treatment outcomes: An overview about well-established and recently emerging clinical data. *Crit Rev Oncol Hematol*, 2017, 120, s. 163–179.
- 2 Griffiths, E. A. – Roy, V. – Alwan, L., et al.: NCCN Guidelines Insights: Hematopoietic Growth Factors, Version 1.2022. 2022, 20, s. 436–442. Dostupné z: https://www.nccn.org/professionals/physician_gls/pdf/growthfactors.pdf, vyhledáno 17. 4. 2025.
- 3 Aapro, M. S. – Bohlius, J. – Cameron, D. A., et al.: 2010 update of EORTC guidelines for the use of granulocyte-colony stimulating factor to reduce the incidence of chemotherapy-induced febrile neutropenia in adult patients with lymphoproliferative disorders and solid tumours. *Eur J Cancer*, 2011, 47, s. 8–32.
- 4 Lyman, G. H. – Kuderer, N. M. – Crawford, J., et al.: Predicting individual risk of neutropenic complications in patients receiving cancer chemotherapy. *Cancer*, 2011, 117, s. 1917–1927.
- 5 Lyman, G. H. – Lyman, C. H. – Agboola, O.: Risk models for predicting chemotherapy-induced neutropenia. *Oncologist*, 2005, 10, s. 427–437.
- 6 Smith, T. J. – Bohlike, K. – Lyman, G. H., et al.: Recommendations for the use of WBC growth factors: American Society of Clinical Oncology clinical practice guideline update. *J Clin Oncol*, 2015, 33, s. 3199–3212.
- 7 Lalami, Y. – Klastersky, J.: Impact of chemotherapy-induced neutropenia (CIN) and febrile neutropenia (FN) on cancer treatment outcomes: An overview about well-established and recently emerging clinical data. *Crit Rev Oncol Hematol*, 2017, 120, s. 163–179.
- 8 Louwman, W. J. – Vulto, J. C. M. – Verhoeven, R. H. A., et al.: Clinical epidemiology of breast cancer in the elderly. *Eur J Cancer*, 2007, 43, s. 2242–2252.
- 9 Wedding, U. – Pientka, L. – Hoffken, K.: Quality-of-life in elderly patients with cancer: a short review. *Eur J Cancer*, 2007, 43, s. 2203–2210.
- 10 Lyman, G. H. – Delgado, D. J.: Risk and timing of hospitalization for febrile neutropenia in patients receiving CHOP, CHOP-R, or CNOP chemotherapy for intermediate-grade non-Hodgkin's lymphoma. *Cancer*, 2003, 98, s. 2402–2409.
- 11 Horowitz, N. S. – Wright, A.: Impact of obesity on chemotherapy management and outcomes in women with gynecologic malignancies. *Gynecol Oncol*, 2015, 138, s. 201–206.
- 12 Schmitt, A. – Gladieff, L. – Lansiaux, A., et al.: A universal formula based on cystatin C to perform individual dosing of carboplatin in normal weight, underweight, and obese patients. *Clin Cancer Res*, 2009, 15, s. 3633–3639.
- 13 Kuderer, N. M. – Dale, D. C. – Crawford, J., et al.: Impact of primary prophylaxis with granulocyte colony-stimulating factor on febrile neutropenia and mortality in adult cancer patients receiving chemotherapy: a systematic review. *J Clin Oncol*, 2007, 25, s. 3158–3167.
- 14 Aapro, M. S. – Cameron, D. A. – Pettengell, R., et al.: EORTC guidelines for the use of granulocyte-colony stimulating factor to reduce the incidence of chemotherapy-induced febrile neutropenia in adult patients with lymphomas and solid tumours. *Eur J Cancer*, 2006, 42, s. 2433–2453.
- 15 Smith, T. J. – Khatcheressian, J. – Lyman, G. H., et al.: 2006 update of recommendations for the use of white blood cell growth factors: an evidence-based clinical practice guideline. *J Clin Oncol*, 2006, 24, s. 3187–3205.
- 16 Segal, B. H. – Freifeld, A. G. – Baden, L. R., et al.: Prevention and treatment of cancer-related infections. *J Natl Compr Canc Netw*, 2008, 6, s. 122–174.
- 17 Modrá kniha České onkologické společnosti. Kiss I., et al.: Aktualizace: 31. MOU BRNO. 2025. Dostupné z: <https://www.links.cz/lekar-a-multidisciplinari-ni-tym/personalizovana-onkologie/modra-kniha-cos/aktualni-vydani-modre-knihy/>, vyhledáno 22. 4. 2025.

Kombinovaná léčba pacientů s autoimunitním syndromem (ITP, WAIHA, IBD, sarkoidóza)

MUDr. Libor Červínek, Ph.D. Interní hematologická a onkologická klinika, LF MU a FN Brno

- 1 Rodeghiero, F. – Stasi, R. – Gernsheimer, T., et al.: Standardization of terminology, definitions and outcome criteria in immune thrombocytopenic purpura of adults and children: report from an international working group. *Blood*, 2009, 113, s. 2386–2393.
- 2 McMillan, R.: Therapy for adults with refractory chronic immune thrombocytopenic purpura. *Ann Internal Med*, 1997, 126, s. 307–314.
- 3 Stasi, R. – Pagano, A. – Stipa, E., et al.: Rituximab chimeric anti-CD20 monoclonal antibody treatment for adults with chronic idiopathic thrombocytopenic purpura. *Blood*, 2001, 98, s. 952–957.
- 4 Cooper, N. – Stasi, R. – Cunningham-Rundles, S., et al.: The efficacy and safety of B-cell depletion with anti-CD20 monoclonal antibody in adults with chronic immune thrombocytopenic purpura. *Br J Haematol*, 2004, 125, s. 232–239.
- 5 British Committee for Standard in Haematology General Haematology Task Force: Guidelines for the investigation and management of idiopathic thrombocytopenic purpura in adults, children and in pregnancy. *Br J Haematol*, 2003, 120, s. 574–596.
- 6 Provan, D. – Stasi, R. – Newland, A. C., et al.: International consensus report on the investigation and management of primary immune thrombocytopenia. *Blood*, 2010, 115, s. 168–186.
- 7 Aboud, N. – Depré, F. – Salama, A.: Is autoimmune thrombocytopenia itself the primary disease in the presence of second diseases data from a long-term observation. *Transfus Med Hemother*, 2017, 44, s. 23–28.

Deficit železa a anemie u pacientů s idiopatickými střevními záněty

doc. MUDr. Pavel Kohout, Ph.D. Interní oddělení, 3. LF UK a FTN, Praha

- 1 Auerbach, M. – DeLoughery, T. G. – Timauer, J. S.: Iron deficiency in adults. A review. *JAMA*, 2025, doi: 10.1001/jama.2025.045.
- 2 Camaschella, C.: Iron deficiency. *Blood*, 2019, 133, s. 30–39.
- 3 Iolascon, A. – Andolfo, I. – Russo, R., et al.: Recommendations for diagnosis, treatment, and prevention of iron deficiency and iron deficiency anemia. *HemaSphere*, 2024, 8, e108.
- 4 Peyrin-Biroulet, L. – Bouguen, G. – Laharie, D., et al.: CARENFER study group: Iron deficiency in patients with inflammatory bowel diseases: a prospective multicenter cross-sectional study. *Dig Dis Sci*, 2022, 67, s. 5637–5646.
- 5 Kulnigg, S. – Teischinger, L. – Cet, D., et al.: Rapid recurrence of IBD-associated anemia and iron deficiency after intravenous iron sucrose and erythropoietin treatment. *Am J Gastroenterol*, 2009, 104, s. 1460–1467.

Sideropenická anemie – proč je důležité důsledné a kompletní vyšetření krevních ztrát

MUDr. Lenka Mastíková Ústav hematologie a krevní transfuze, Praha

- 1 World Health Organization. Guideline on haemoglobin cutoffs to define anaemia in individuals and populations. Dostupné z: www.who.int/publications/i/item/9789240088542, vyhledáno 1. 4. 2025.
- 2 Peyrin-Biroulet, L. – Willet, N. – Cacoub, P.: Guidelines on the diagnosis and treatment of iron deficiency anemia. *Am J Clin Nutr*, 2015, 102, s. 1585–1594.
- 3 Gardner, W. M., et al.: Prevalence, years lived with disability, and trends in anaemia burden by severity and cause, 1990–2021: findings from the Global Burden of Disease Study 2021. *Lancet Haematol*, 2023, 10, s. e713–e734.
- 4 Cook, J. D. – Skikne, B. S.: Iron deficiency: definition and diagnosis. *J Intern Med*, 1989, 226, s. 349–355.
- 5 Camaschella, C.: Iron deficiency anemia. *N Engl J Med*, 2015, 372, s. 1832–1843.
- 6 Červená kniha – Léčebné postupy v hematologii. Kapitola 25: Čermák, J.: Anemie z nedostatku železa. Aktualizováno: 27. 1. 2025. Dostupné z: <https://www.hematology.cz/wp-content/uploads/2025/01/25-Anemie-z-nedostatku-zeleza-verze-01-2025.pdf>, s. 1–6, vyhledáno 1. 4. 2025.
- 7 Snook, J. – Bhala, N. – Beales, I. L. P., et al.: British Society of Gastroenterology guidelines for the management of iron deficiency anaemia in adults. *Gut*, 2021, 70, s. 2030–2051.
- 8 Ko, C. W. – Siddique, S. M. – Patel, A., et al.: AGA clinical practice guidelines on the gastrointestinal evaluation of iron deficiency anemia. *Gastroenterology*, 2020, 159, s. 1085–1094.

Léčba nízké rizikové polycythaemia vera ropeginterferonem

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- 1 Dostupné z: <https://cs.wikipedia.org/wiki/Interferon>, vyhledáno 26. 4. 2025.
- 2 Schwarz, J.: Sympozium CZEMP 7. 6. 2024.
- 3 Birgegård, G. – Besses, C. – Griesshammer, M., et al.: Treatment of essential thrombocythemia in Europe: a prospective long-term observational study of 3649 high-risk patients in the Evaluation of Anagrelide Efficacy and Long-term Safety study. *Haematologica*, 2018, 103, s. 51–60.
- 4 Gisslinger, H. – Zagrijtschuk, O. – Buxhofer-Ausch, V., et al.: Ropeginterferon alfa-2b, a novel IFNα-2b, induces high response rates with low toxicity in patients with polycythemia vera. *Blood*, 2015, 126, s. 1762–1769.
- 5 Gisslinger, H., et al.: Event-free survival in patients with polycythemia vera treated with ropeginterferon alfa-2b versus best available treatment. *Leukemia*, 2023, 37, s. 2129–2132.

Úspěšná léčba refrakterní akutní myeloidní leukemie s mutací isocitrátdehydrogenázy 1 (IDH1) pomocí ivosidenibu, inhibitoru IDH1

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- 1 Montesinos, P. – Recher, C. – Vives, S., et al.: Ivosidenib and azacitidine in IDH1-mutated acute myeloid leukemia. *N Engl J Med*, 2022, 386, s. 1519–1531.
- 2 Popovici-Muller, J. – Lemieux, R. M. – Artin, E., et al.: Discovery of AG-120 (ivosidenib): a first-in-class mutant IDH1 inhibitor for the treatment of IDH1 mutant cancers. *ACS Med Chem Lett*, 2018, 9, s. 300–305.
- 3 DiNardo, C. D. – Stein, E. M. – de Botton, S., et al.: Durable remissions with ivosidenib in IDH1-mutated relapsed or refractory AML. *N Engl J Med*, 2018, 378, s. 2386–2398.
- 4 Genthon, A. – Dragoi, D. – Memoli, M., et al.: Isocitrate dehydrogenase inhibitors as a bridge to allogeneic stem cell transplant in relapsed or refractory acute myeloid leukaemia. *Br J Haematol*, 2022, 198, s. 780–784.

Elranatamab v léčbě relabujícího či refrakterního mnohočetného myelomu

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- 1 Mateos, M. V., et al.: LocoMMotion: a prospective, non-interventional, multinational study of real-life current standards of care in patients with relapsed and/or refractory multiple myeloma. *Leukemia*, 2022, 36, s. 1371–1376.
- 2 Shah, N. – Chari, A. – Scott, E., et al.: B-cell maturation antigen (BCMA) in multiple myeloma: rationale for targeting and current therapeutic approaches. *Leukemia*, 2020, 34, s. 985–1005.
- 3 Panowski, S. H., et al.: Preclinical efficacy and safety comparison of CD3 bispecific and ADC modalities targeting BCMA for the treatment of multiple myeloma. *Mol Cancer Ther*, 2019, 18, s. 2008–2020.
- 4 Andrzej, J. J., et al.: Elranatamab, a BCMA-targeted T-cell redirecting immunotherapy, for patients with relapsed or refractory multiple myeloma: updated results from MagnetisMM-1. *J Clin Oncol*, 2022, 40, suppl. 16, s. 8014–8014.
- 5 Raju, N., et al.: Elranatamab, a BCMA targeted T-cell engaging bispecific antibody, induces durable clinical and molecular responses for patients with relapsed or refractory multiple myeloma. *Blood*, 2022, 140, suppl. 1, s. 388–390.
- 6 Lesokhin, A. M., et al.: Initial safety results for MagnetisMM-3: a phase 2 trial of elranatamab, a B-cell maturation antigen (BCMA)-CD3 bispecific antibody, in patients (pts) with relapsed/refractory (R/R) multiple myeloma (MM). *J Clin Oncol*, 2022, 40, suppl. 16, s. 8006–8006.
- 7 Lesokhin, A. M., et al.: Elranatamab in relapsed or refractory multiple myeloma: phase 2 MagnetisMM-3 trial results. *Nat Med*, 2023, 29, s. 2259–2267.
- 8 Kumar, S., et al.: International Myeloma Working Group consensus criteria for response and minimal residual disease assessment in multiple myeloma. *Lancet Oncol*, 2016, 17, s. e328–e346.

Recentní doporučení KDIGO pro léčbu glomerulonefritidy

prof. MUDr. Vladimír Tesař, DrSc. Klinika nefrologie, 1. LF UK a VFN v Praze

- 1 Anders, H. J. – Furie, R. – Malvar, A., et al.: Effect of belimumab on kidney-related outcomes in patients with lupus nephritis: post hoc subgroup analyses of the phase 3 BLISS-LN trial. *Nephrol Dial Transplant*, 2023, 38, s. 2733–2742.
- 2 Appel, G. B. – Contreras, G. – Dooley, M. A., et al.: Mycophenolate mofetil versus cyclophosphamide for induction treatment of lupus nephritis. *J Am Soc Nephrol*, 2009, 20, s. 1103–1112.
- 3 Barratt, J. – Lafayette, R. – Kristensen, J., et al.: Results from part A of the multi-center, double-blind, randomized, placebo-controlled NeflgArd trial, which evaluated targeted-release formulation of budesonide for the treatment of primary immunoglobulin A nephropathy. *Kidney Int*, 2023, 103, s. 391–402.
- 4 Barratt, J. – Rovin, B. H. – Cattran, D., et al.: Why target the gut to treat IgA nephropathy? *Kidney Int Rep*, 2020, 5, s. 1620–1624.
- 5 Cortazar, F. B. – Niles, J. L. – Jayne, D. R. W., et al.: Renal recovery for patients with ANCA-associated vasculitis and low eGFR in the ADVOCATE trial of avacopan. *Kidney Int Rep*, 2023, 8, s. 860–870.
- 6 Dall'Era, M. – Kalunian, K. – Solomons, N., et al.: Comparison of a voclosporin-based triple immunosuppressive therapy to high-dose glucocorticoid-based immunosuppressive therapy: a propensity analysis of the AURA-LV and AURORA 1 studies and ALMS. *Lupus Sci Med*, 2024, 11, e001319.
- 7 Fellstrom, B. C. – Barratt, J. – Cook, H., et al.: Targeted-release budesonide versus placebo in patients with IgA nephropathy (NEFIGAN): a double-blind, randomised, placebo-controlled phase 2b trial. *Lancet*, 2017, 389, s. 2117–2127.
- 8 Floege, J. – Jayne, D. R. W. – Sanders, J. F., et al.: Executive summary of the KDIGO 2024 clinical practice guideline for the management of ANCA-associated vasculitis. *Kidney Int*, 2024, 105, s. 447–449.
- 9 Floege, J. – Gibson, K. L. – Vivarelli, M., et al.: KDIGO 2024 clinical practice guideline for the management of immunoglobulin A nephropathy (IgAN) and immunoglobulin A vasculitis (IgAV) – public review draft August 2024. Dostupné z: <https://kdigo.org/wp-content/uploads/2024/08/KDIGO-2024-IgAN-IgAV-Guideline-Public-Review-Draft.pdf>, vyhledáno 24. 4. 2025.
- 10 Furie, R. – Rovin, B. H. – Houssiau, F., et al.: Two-year, randomized, controlled trial of belimumab in lupus nephritis. *N Engl J Med*, 2020, 383, s. 1117–1128.
- 11 Furie, R. – Rovin, B. H. – Houssiau, F., et al.: Safety and efficacy of belimumab in patients with lupus nephritis: open-label extension of BLISS-LN Study. *Clin J Am Soc Nephrol*, 2022, 17, s. 1620–1630.
- 12 Heerspink, H. J. L. – Radhakrishnan, J. – Alpers, C. E., et al.: Sparsentan in patients with IgA nephropathy: a prespecified interim analysis from a randomised, double-blind, active-controlled clinical trial. *Lancet*, 2023, 401, s. 1584–1594.
- 13 Jayne, D. R. W. – Merkel, P. A. – Schall, T. J., et al.: Avacopan for the treatment of ANCA-associated vasculitis. *N Engl J Med*, 2021, 384, s. 599–609.
- 14 Lafayette, R. – Kristensen, J. – Stone, A., et al.: Efficacy and safety of a targeted-release formulation of budesonide in patients with primary IgA nephropathy (NeflgArd): 2-year results from a randomised phase 3 trial. *Lancet*, 2023, 402, s. 859–870.
- 15 Malvar, A. – Alberton, V. – Recelde, C., et al.: Repeat kidney biopsy findings of lupus nephritis patients in clinical remission treated with mycophenolate associated with belimumab or mycophenolate plus standard of care therapy. A "post-hoc" analysis of participants in the BLISS-LN and open label extension study belonging to a single center. *Lupus*, 2023, 32, s. 1394–1401.
- 16 Pitcher, D. – Braddon, F. – Hendry, B., et al.: Long-term outcomes in IgA nephropathy. *Clin J Am Soc Nephrol*, 2023, 18, s. 727–738.
- 17 Rovin, B. H. – Solomons, N. – Pendergraft, W. F. 3rs., et al.: A randomized, controlled double-blind study comparing the efficacy and safety of dose-ranging voclosporin with placebo in achieving remission in patients with active lupus nephritis. *Kidney Int*, 2019, 95, s. 219–231.
- 18 Rovin, B. H. – Teng, Y. K. O. – Ginzler, E. M., et al.: Efficacy and safety of voclosporin versus placebo for lupus nephritis (AURORA 1): a double-blind, randomised, multicentre, placebo-controlled, phase 3 trial. *Lancet*, 2021, 397, s. 2070–2080.
- 19 Rovin, B. N. – Adler, S. G. – Barratt, J., et al.: Executive summary of the KDIGO 2021 guideline for the management of glomerular diseases. *Kidney Int*, 2021, 100, s. 753–779.
- 20 Rovin, B. H. – Furie, R. – Teng, Y. K. O., et al.: A secondary analysis of the Belimumab International Study in Lupus Nephritis trial examined effects of belimumab on kidney outcomes and preservation of kidney function in patients with lupus nephritis. *Kidney Int*, 2022, 101, s. 403–413.
- 21 Rovin, B. H. – Barratt, J. – Heerspink, H. J. L., et al.: Efficacy and safety of sparsentan versus irbesartan in patients with IgA nephropathy (PROTECT): 2-year results from a randomised, active-controlled, phase 3 trial. *Lancet*, 2023, 402, s. 2077–2090.
- 22 Rovin, B. H. – Ayoub, I. M. – Chan, T. M., et al.: Executive summary of the KDIGO 2024 clinical practice guideline for the management of lupus nephritis. *Kidney Int*, 2024, 105, s. 31–34.
- 23 Saxena, A. – Ginzler, E. M. – Gibson, K., et al.: Safety and efficacy of long-term voclosporin treatment for lupus nephritis in the phase 3 AURORA 2 clinical trial. *Arthritis Rheumatol*, 2024, 76, s. 59–67.
- 24 Wheeler, D. C. – Toto, R. D. – Stefánsson, B. V., et al.: A pre-specified analysis of the DAPA-CKD trial demonstrates the effects of dapagliflozin on major adverse kidney events in patients with IgA nephropathy. *Kidney Int*, 2021, 100, s. 215–224.