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NEWS & VIEWS REFERENCES

Sleeve Gastrectomy Safer than Roux-en-Y in Older People

1. Xu C, Yan T, Liu H, Mao R, Peng Y, Liu Y. Comparative Safety and Effectiveness of Roux-en-Y Gastric Bypass and Sleeve Gastrectomy in Obese Elder Patients: a Systematic Review and Meta-analysis. OBES SURG 30, 3408–3416 (2020). https://doi.org/10.1007/s11695-020-04577-2

One hundred and ninety-six hours: a new insulin analogue.

1. Rosenstock J, Bajaj HS, Janež A, Silver R, Begtrup K, Hansen MV, Jia T, Goldenberg R, the NN1436-4383 Investigators. Once-Weekly Insulin for Type 2 Diabetes without Previous Insulin Treatment. NEJM September 22, 2020 DOI: 10.1056/NEJMoa2022474

Metformin in Pregnancy

1. Hague WM, Metformin in pregnancy and lactation. NPS MedicineWise. Aust Prescr 2007;30:68-9 1 June 2007 DOI: 10.18773/austprescr.2007.040
2. Therapeutic Goods Administration. Australian categorisation system for prescribing medicines in pregnancy, 4 May 2011. https://www.tga.gov.au/australian-categorisation-system-prescribing-medicines-pregnancy Accessed 29 September 2020.
3. Feig DS, Donovan LE, Zinman B, Sanchez JJ, Asztalos E, Ryan EA, Fantus IG, Hutton E, Armson AB, Lipscombe LL, Simmons D, Barrett JFR, Karanicolas, JR, Tobin S, McIntyre HD, Yu Tian S, Tomlinson G, Murphy KE, theMiTy Collaborative Group. Metformin in women with type 2 diabetes in pregnancy (MiTy): a multicentre, international, randomised, placebo-controlled trial. October 2020 DOI:10.1016/S2213-8587(20)30310-7
4. Xu Q, Xie Q. Long-term effects of prenatal exposure to metformin on the health of children based on follow-up studies of randomized controlled trials: a systematic review and meta-analysis. Arch Gynecol Obstet. 2019 May;299(5):1295-1303. doi: 10.1007/s00404-019-05124-w. Epub 2019 Apr 5. PMID: 30953188.
5. Atlay K. Metformin benefits pregnant women on insulin, study finds. Australian Doctor News, 16th September 2020. https://www.ausdoc.com.au/news/metformin-benefits-pregnant-women-insulin-study-finds Accessed 29 September 2020.
6. Tan X, Li S, Chang Y, Fang C, Liu H, Zhang X, Wang Y. Effect of metformin treatment during pregnancy on women with PCOS: a systematic review and meta-analysis. Clin Invest Med. 2016 Sep 11;39(4):E120-31. doi: 10.25011/cim.v39i4.27091. PMID: 27619399.
7. Vanky E, Salvesen KA, Heimstad R, Fougner KJ Romundstad P, Carlsen SM. Metformin reduces pregnancy complications without affecting androgen levels in pregnant polycystic ovary syndrome women: results of a randomized study. PubMed June 3, 2004. PMID: 15178665 DOI: 10.1093/humrep/deh347

FEATURE REFERENCES

p8-12 The Heart's Performance when Diabetes is the Puppeteer

1. Diabetes, How many Australians have diabetes? Australian Institute of Health and Welfare https://www.aihw.gov.au/reports/diabetes/diabetes-snapshot/contents/how-many-australians-have-diabetes.
2. RACGP - Introduction. https://www.racgp.org.au/clinical-resources/clinical-guidelines/key-racgp-guidelines/view-all-racgp-guidelines/diabetes/introduction.
3. Kannel WB, McGee DL. Diabetes and cardiovascular disease. The Framingham study. JAMA 241, 2035–2038 (1979).
4. American Diabetes Association. 9. Pharmacologic Approaches to Glycemic Treatment: Standards of Medical Care in Diabetes-2020. Diabetes Care 43, S98–S110 (2020).
5. Redfield MM. Heart Failure with Preserved Ejection Fraction. N. Engl. J. Med. 375, 1868–1877 (2016).
6. Patil VC, Patil HV, Shah KB, Vasani JD, Shetty P. Diastolic dysfunction in asymptomatic type 2 diabetes mellitus with normal systolic function. J. Cardiovasc. Dis. Res. 2, 213–222 (2011).
7. Dunlay SM, Roger VL, Redfield MM. Epidemiology of heart failure with preserved ejection fraction. Nat. Rev. Cardiol. 14, 591–602 (2017).

Diabetes Management Journal

p8-12 The Heart's Performance Cont'd

8. Pieske B. et al. How to diagnose heart failure with preserved ejection fraction: the HFA-PEFF diagnostic algorithm: a consensus recommendation from the Heart Failure Association (HFA) of the European Society of Cardiology (ESC). Eur. J. Heart Fail. 22, 391–412 (2020).
9. Porrello ER, Delbridge, LMD. HFpEF-Time to Explore the Role of Genetic Heterogeneity in Phenotypic Variability: New Mechanistic Insights Offer Promise for Personalized Therapies. Circulation 140, 1607–1609 (2019).
10. Campbell DJ et al. Impact of type 2 diabetes and the metabolic syndrome on myocardial structure and microvasculature of men with coronary artery disease. Cardiovasc. Diabetol. 10, 80 (2011).
11. Ritchie RH, Abel ED. Basic Mechanisms of Diabetic Heart Disease. Circ. Res. 126, 1501–1525 (2020).
12. Chandramouli C. et al. Diastolic dysfunction is more apparent in STZ-induced diabetic female mice, despite less pronounced hyperglycemia. Sci. Rep. 8, 2346 (2018).
13. Mellor KM, Reichelt ME, Delbridge LMD. Autophagy anomalies in the diabetic myocardium. Autophagy 7, 1263–1267 (2011).
14. Moir, S. et al. Relationship between myocardial perfusion and dysfunction in diabetic cardiomyopathy: a study of quantitative contrast echocardiography and strain rate imaging. Heart Br. Card. Soc. 92, 1414–1419 (2006).
15. Riehle C, Bauersachs J. Of mice and men: models and mechanisms of diabetic cardiomyopathy. Basic Res. Cardiol. 114, 2 (2018).
16. Lam B, Stromp TA, Hui Z, Vandsburger M. Myocardial native-T1 times are elevated as a function of hypertrophy, HbA1c, and heart rate in diabetic adults without diffuse fibrosis. Magn. Reson. Imaging 61, 83–89 (2019).
17. Delbridge LMD, Benson VL, Ritchie RH, Mellor KM. Diabetic Cardiomyopathy: The Case for a Role of Fructose in Disease Etiology. Diabetes 65, 3521–3528 (2016).
18. Anderson EJ. et al. Substrate-specific derangements in mitochondrial metabolism and redox balance in the atrium of the type 2 diabetic human heart. J. Am. Coll. Cardiol. 54, 1891–1898 (2009).
19. Marwick TH, Ritchie R, Shaw JE, Kaye D. Implications of Underlying Mechanisms for the Recognition and Management of Diabetic Cardiomyopathy. J. Am. Coll. Cardiol. 71, 339–351 (2018).
20. Seferović PM, et al. Type 2 diabetes mellitus and heart failure: a position statement from the Heart Failure Association of the European Society of Cardiology. Eur. J. Heart Fail. 20, 853–872 (2018).
21. Shah SJ. Precision Medicine for Heart Failure with Preserved Ejection Fraction: An Overview. J Cardiovasc. Transl. Res. 10, 233–244 (2017).
22. Chandramouli C. et al. Association of obesity with heart failure outcomes in 11 Asian regions: A cohort study. PLoS Med. 16, e1002916 (2019).
23. Spotlight Series: HFpEF: Heart failure with preserved ejection fraction. The Heart Failure Policy Network https://www.hfpolicynetwork.org/spotlight-series/.
24. Pyrlis F, Brown F, Ekinci E. Recent advances in management of type 1 diabetes. Aust. J. Gen. Pract. 48, 256–261 (2019).
25. Figtree GA. et al. Effects of Canagliflozin on Heart Failure Outcomes Associated With Preserved and Reduced Ejection Fraction in Type 2 Diabetes Mellitus. Circulation 139, 2591–2593 (2019).
26. Lam CSP, Chandramouli C, Ahooja V, Verma S. SGLT-2 Inhibitors in Heart Failure: Current Management, Unmet Needs, and Therapeutic Prospects. J. Am. Heart Assoc. 8, e013389 (2019).
27. Packer M, Anker SD, Butler J, Filippatos G, Pocock SJ, Carson P, Januzzi J, Verma S, Tsutsui H, Brueckmann M, Jamal W, Kimura K, Schnee J, Zeller C, Cotton D, Bocchi E, Böhm M, Choi D-J, Chopra V, Chuquiure E, Giannetti N, Janssens S, Zhang J, Gonzalez Juanatey JR, Kaul S, Brunner-La Rocca H-P, Merkely B, Nicholls SJ, Perrone S, Pina I, Ponikowski P, Sattar N, Senni M, Seronde M-F, Spinar J, Squire I, Taddei S, Wanner C, and Zannad F, for the EMPEROR-Reduced Trial Investigators. Cardiovascular and Renal Outcomes with Empagliflozin in Heart Failure, October 8, 2020 N Engl J Med 2020; 383:1413-1424 DOI: 10.1056/NEJMoa2022190

p8-12 The Heart's Performance Cont'd

28. McMurray JJV, Solomon SD, Inzucchi SE, Køber L, Kosiborod MN, Martinez FA, Ponikowski P, Sabatine MS, Anand IS, Bělohlávek J, Böhm M, Chiang C-E, Chopra VK, de Boer RA, Desai AS, Diez M, Drozdz J, Dukát A, Ge J, Howlett JG, Katova T, Kitakaze M, Ljungman CEA, Merkely B, Nicolau JC, O'Meara E, Petrie MC, Vinh PN, Schou M, Tereshchenko S, Verma S, Held C, DeMets DL, Docherty KF, Jhund PS, Bengtsson O, Sjöstrand M, and Langkilde A-M, for the DAPA-HF Trial Committees and Investigators. Dapagliflozin in Patients with Heart Failure and Reduced Ejection Fraction. November 21, 2019 N Engl J Med 2019; 381:1995-2008 DOI: 10.1056/NEJMoa1911303

P14 – 16 Diabetes Australia Supporting Breakthroughs in Diabetes Research

1. https://www.diabetesaustralia.com.au/research-advocacy/research/
2. 2021 Research guidelines: www.diabetesaustralia.com.au/wp-content/uploads/2021-DARP-Guidelines_24082020_FINAL.pdf
3. 2021 Grant application download: https://www.diabetesaustralia.com.au/wp-content/uploads/2021-Grant_ApplicationForm_24082020_FINAL.docx
4. Funded research details: https://www.diabetesaustralia.com.au/news_type/research/

p21 Do Microbiome Changes Predict Diabetes?

1. Reitmeier S, Kiessling S,Clavel T, List M, Almeida EL, Ghosh TS, Neuhaus K, Grallert H, Linseisen J, Skurk T, Brandl B, Breuninger TA, Troll M, Rathmann W, Linkohr B, Hauner H, Laudes M, Franke A, Le Roy CI, Bell JT, Spector T, Baumbach J, O'Toole PW, Peters A, Haller D. (2020): "Arrhythmic gut microbiome signatures predict risk of Type 2 Diabetes" in: Cell Host & Microbe. DOI: 10.1016/j.chom.2020.06.004
2. Rivera AS, Akanbi M, O'Dwyer LC, McHugh M. Shift work and long work hours and their association with chronic health conditions: A systematic review of systematic reviews with meta-analyses. PLOS ONE, April 2, 2020 DOI: 10.1371/journal.pone.0231037
3. Wu H, Tremaroli V, Schmidt C, Lundqvist A, Olsson LM, Krämer M, Gummesson A, Perkins R, Bergström G, Bäckhed F. The Gut Microbiota in Prediabetes and Diabetes: A Population-Based Cross-Sectional Study. Cell Metabolism July 10, 2020 DOI: 10.1016/j.cmet.2020.06.011

p23-25 Prediabetes – A Pivotal Moment

1. Bell K, Shaw JE, Maple-Brown L, Ferris W, Gray S, Murfet G, Flavel R, Maynard B, Ryrie H, Pritchard B, Freeman R, Gordon BA. A position statement on screening and management of prediabetes in adults in primary care in Australia. Diabetes Res Clin Pract. 2020; 164: 108188.
2. Shaw J, Tanamas S. Diabetes: the silent pandemic and its impact on Australia. Melbourne, Australia: 2012.
3. Abdul-Ghani M, Tripathy D, DeFronzo R. Contributions of beta-cell dysfunction and insulin resistance to the pathogenesis of impaired glucose tolerance and impaired fasting glucose. Diabetes Care. 2006; 29: 1130-9.
4. Chen L, Magliano DJ, Balkau B, Colagiuri S, Zimmet PZ, Tonkin AM, Mitchell P, Phillips PJ and Shaw JE. AUSDRISK: an Australian Type 2 Diabetes Risk Assessment Tool based on demographic, lifestyle and simple anthropometric measures. Med J Aust. 2010; 192: 197-202.

Diabetes Management Journal

p23-25 Prediabetes – A Pivotal Moment Cont'd

5. Paulweber B, Valensi P, Lindström J, Lalic NM, Greaves CJ, McKee M, Kissimova-Skarbek K, Liatis S, Cosson E, Szendroedi J, Sheppard KE, Charlesworth K, Felton A-M, Hall M, Rissanen A, Tuomilehto J, Schwarz PE, Roden M, Paulweber M, Stadlmayr A, Kedenko L, Katsilambros N, Makrilakis K, Kamenov Z, Evans P, Gilis-Januszewska A, Lalic K, Jotic A, Djordevic P, Dimitrijevic-Sreckovic V, Hühmer U, Kulzer B, Puhl S, Lee-Barkey YH, AlKerwi A, Abraham, Hardeman CW, Acosta T, Adler M, AlKerwi A, Barengo N, Barengo R, Boavida JM, Charlesworth K, Christov V, Claussen B, Cos X, Cosson E, Deceukelier S, Dimitrijevic-Sreckovic V, Djordjevic P, Evans P, Felton A-M, Fischer M, Gabriel-Sanchez R, Gilis-Januszewska A, Goldfracht M, Gomez JL, Greaves CJ, Hall M, Handke U, Hauner H, Herbst J, Hermanns N, Herrebrugh L, Huber C, Hühmer U, Huttunen J, Jotic A, Kamenov Z, Karadeniz S, Katsilambros N, Khalangot M, Kissimova-Skarbek K, Köhler D, Kopp V, Kronsbein P, Kulzer B, Kyne-Grzebalski D, Lalic K, Lalic N, Landgraf R, Lee-Barkey YH, Liatis S, Lindström J, Makrilakis K, McIntosh C, McKee M, Mesquita AC, Misina D, Muylle F, Neumann A, Paiva AC, Pajunen P, Paulweber B, Peltonen M, Perrenoud L, Pfeiffer A, Pölönen A, Puhl S, Raposo F, Reinehr T, Rissanen A, Robinson C, Roden M, Rothe U, Saaristo T, Scholl J, Schwarz PE, Sheppard KE, Spiers S, Stemper T, Stratmann B, Szendroedi J, Szybinski Z, Tankova T, Telle-Hjellset V, Terry G, Tolks D, Toti F, J Tuomilehto J, A Undeutsch, C Valadas, P Valensi, D Velickiene, P Vermunt, R Weiss, Wens J, Yilmaz T. A European evidence-based guideline for the prevention of type 2 diabetes. Horm Metab Res. 2010; 42 Suppl 1: S3-36.
6. Penn L, White M, Lindström J, den Boer AT, Blaak E, Eriksson JG, Feskens E, Ilanne-Parikka P, Keinänen-Kiukaanniemi SM, Walker M, Mathers JC, Uusitupa M, Tuomilehto J. Importance of Weight Loss Maintenance and Risk Prediction in the Prevention of Type 2 Diabetes: Analysis of European Diabetes Prevention Study RCT. PLoS One. 2013; 8: e57143.
7. Johnston BC, Kanters S, Bandayrel K, Wu P, Naji F, Siemieniuk RA, Ball GDC, Busse JW, Thorlund K, Gordon Guyatt G, Jansen JP, Mills EJ. Comparison of weight loss among named diet programs in overweight and obese adults: a meta-analysis. J Am Med Assoc. 2014; 312: 923-33.
8. Forouhi NG, Krauss RM, Taubes G, Willett W. Dietary fat and cardiometabolic health: evidence, controversies, and consensus for guidance. Br Med J. 2018; 361: k2139.
9. Forouhi NG, Misra A, Mohan V, Taylor R, Yancy W. Dietary and nutritional approaches for prevention and management of type 2 diabetes. Br Med J. 2018; 361: k2234.
10. Mozaffarian D. Dietary and Policy Priorities for Cardiovascular Disease, Diabetes, and Obesity: A Comprehensive Review. Circulation. 2016; 133: 187-225.
11. Ajala O, English P, Pinkney J. Systematic review and meta-analysis of different dietary approaches to the management of type 2 diabetes. The American Journal of Clinical Nutrition. 2013; 97: 505-16.
12. Tonstad S, Stewart K, Oda K, Batech M, Herring RP, Fraser GE. Vegetarian diets and incidence of diabetes in the Adventist Health Study-2. Nutr Metab Cardiovasc Dis. 2013 Apr;23(4):292-9. doi: 10.1016/j.numecd.2011.07.004. Epub 2011 Oct 7. PMID: 21983060; PMCID: PMC3638849.
13. Council NHaMR. Australian Dietary Guidelines. Canberra: Nationale Health and Medical Research Council; 2013.
14. Lee D, Sui X, Church TS, Lee I, Blair SN. Associations of Cardiorespiratory Fitness and Obesity With Risks of Impaired Fasting Glucose and Type 2 Diabetes in Men. Diabetes Care. 2009; 32: 257-62.
15. Hordern MD, Dunstan DW, Prins JB, Baker MK, Fiatarone Singhe MA, Coombes JS. Exercise prescription for patients with type 2 diabetes and pre-diabetes: A position statement from Exercise and Sport Science Australia. J Sci Med Sport. 2012; 15: 25-31.
16. Dempsey PC, Owen N, Yates TE, Kingwell BA, Dunstan DW. Sitting Less and Moving More: Improved Glycaemic Control for Type 2 Diabetes Prevention and Management. Current Diabetes Reports. 2016; 16.
17. Saunders TJ, Atkinson HF, Burr J, MacEwen B, Murray Skeaff C, Peddie MC. The Acute Metabolic and Vascular Impact of Interrupting Prolonged Sitting: A Systematic Review and Meta-Analysis. Sports Med. 2018; 48: 2347-66.
18. Gillies CL, Abrams KR, Lambert PC, Cooper NJ, Sutton AJ, Hsu RT, Khunti K. Pharmacological and lifestyle interventions to prevent or delay type 2 diabetes in people with impaired glucose tolerance: systematic review and meta-analysis. Br Med J. 2007; 334: 299.

Diabetes Management Journal

p23-25 Prediabetes – A Pivotal Moment Cont'd

19. Hendrieckx C, Halliday JA, Beeney LJ, Speight J. Diabetes and Emotional Health: A handbook for health professionals supporting adults with type 1 or type 2 diabetes. Canberra: National Diabetes Services Scheme; 2016.
20. Deschênes SS, Burns RJ, Graham E, Schmitz N. Prediabetes, depressive and anxiety symptoms, and risk of type 2 diabetes: A community-based cohort study. J Psychosom Res. 2016; 89: 85-90.

p26 – p28 Reality Check: Indigenous Australians with T2D: Tackling it together

1. Burrow S, Ride K. Review of diabetes among Aboriginal and Torres Strait Islander people. Australian Indigenous Health Bulletin. March 17 2016. Available from https://healthinfonet.ecu.edu.au/healthinfonet/getContent.php?linkid=590810&title=Review+of+diabetes+among+Aboriginal+and+Torres+Strait+Islander+people
2. 3303.0 – Causes of Death, Australia, 2016. Australian Bureau of Statistics. September 29 2017. Available from: https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/3303.0~2016~Main%20Features~Understanding%20diabetes%20mortality%20in%20Australia~5
3. Chuter V, West M, Hawke F, Searle A. J Foot Ankle Res. March 18 2019. Where do we stand? The availability and efficacy of diabetes related foot health programs for Aboriginal and Torres Strait Islander Australians: a systematic review. Available from: https://jfootankleres.biomedcentral.com/articles/10.1186/s13047-019-0326-1
4. Nguyen HD, Chitturi S, Maple-Brown LJ. Management of diabetes in Indigenous communities: lessons from the Australian Aboriginal population. Internal Medicine Journal. April 30 2016. Available from: https://onlinelibrary.wiley.com/doi/abs/10.1111/imj.13123
5. General practice management of type 2 diabetes – 2014-2015. Melbourne: The Royal Australian College of General Practitioners and Diabetes Australia, 2014. Available from: https://static.diabetesaustralia.com.au/s/fileassets/diabetes-australia/5ed214a6-4cff-490f-a283-bc8279fe3b2f.pdf
6. McDermott RA, Schmidt B, Preece C, Owens V, Taylor S, Li M, et al. Community health workers improve diabetes care in remote Australian Indigenous communities: Results of a pragmatic cluster randomized controlled trial. BMC Health Serv Res. 2015; 15:68.
7. Straw S, Spry E, Yanawana L, Matsumoto V, Cox D, Cox E, Singleton S, Houston N, Scott L, Marley JV. Understanding lived experiences of Aboriginal people with type 2 diabetes living in remote Kimberley communities: diabetes, it don't come and go, it stays! Aust J Prim Health. October 7 2019. Available from: https://www.ncbi.nlm.nih.gov/pubmed/31586501
8. ATSI People Resources. Diabetes Queensland. Available from: https://www.diabetesqld.org.au/managing-diabetes/aboriginal-and-torres-strait-islander/aboriginal-and-torres-strait-islander-people-resources.aspx
9. Stoneman A, Atkinson D, Davey M, Marley JV. Quality improvement in practice: improving diabetes care and patient outcomes in Aboriginal Community Controlled Health Services. October 7 2014. Available from: https://bmchealthservres.biomedcentral.com/articles/10.1186/1472-6963-14-481
10. Lee A, Ride K. Review of nutrition among Aboriginal and Torres Strait Islander people. Australian Indigenous Health Bulletin. February 26 2018. Available from: http://healthbulletin.org.au/articles/review-of-nutrition-among-aboriginal-and-torres-strait-islander-people/
11. Fraser S, Mackean T, Grant J, Hunter K, Towers K, Ivers R. Use of telehealth for health care of Indigenous peoples with chronic conditions: a systematic review. Rural Remote Health. September 20 2017. Available from: https://www.ncbi.nlm.nih.gov/pubmed/28930638
12. Azzopardi P, Brown AD, Zimmet P, Fahy RE, Dent GA, Kelly MJ, Kranzusch K, Maple-Brown LJ, Nossar V, Silink M, Sinha AK, Stone ML, Wren SJ. Type 2 diabetes in young Indigenous Australians in rural and remote areas: diagnosis, screening, management and prevention. Med J Aust. July 02 2012. Available from: https://www.mja.com.au/journal/2012/197/1/type-2-diabetes-young-indigenous-australians-rural-and-remote-areas-diagnosis.

Diabetes Management Journal

p32 – p34 Eating Well for Pancreatic Exocrine Insufficiency

1. Wong J, Wu T. Diabetes of the Exocrine Pancreas. Diabetes Management Journal. 2020;(1):. 201914-16.
2. Nikfarjam M, Wilson JS, Smith RC, Australasian Pancreatic Club Pancreatic Enzyme Replacement Therapy Working Group. Diagnosis and management of pancreatic exocrine insufficieny. Med J Aust, 2017;207(4): 161-165
3. Dominguez-Munoz JE. Management of pancreatic exocrine insufficiency. Current Opinion in Gastroenterology. 2019; 35(5): 455-459
4. Duggan SN, Ewald N, Kelleher L, Gibney J, Conlon KC. The nutritional management of type 3c (pancreatogenic) diabetes in chronic pancreatitis. Eur J Clin Nutr. 2017;71(1): 3-8
5. Gianotti L, Besselink MG, et al. Nutritional support and therapy in pancreatic surgery: A position paper of the International Study Group on Pancreatic Surgery. Surgery. 2018;164(5):1035-1048
6. Storck LJ, Imoberdorf R, Ballmer PE. Nutrition in gastrointestinal disease: Liver, pancreatic and inflammatory bowel disease. J Clin Med. 2019; 8(8): 1098.
7. Ribichini E, Stigliano S, et al. Role of fibre in nutritional management of pancreatic diseases. Nutrients. 2019; 11(9):2219

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