Provider Led Entity

Appropriateness of Advanced Imaging in Patients with Dementia
Bibliography
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Albert MS, DeKosky ST, Dickson D, Dubois B, Feldman HH, Fox NC, Gamst A, Holtzman DM, Jagust WJ, Petersen RC, Snyder PJ, Carrillo MC, Thies B, Phelps CH. The diagnosis of mild cognitive impairment due to Alzheimer's disease: Recommendations from the National Institute on Aging-Alzheimer's Association workgroups on diagnostic guidelines for Alzheimer's disease. Alzheimers Dement. 2011; 7(3):270-279.

Allali G, Garibotto V, Mainta IC, Nicastro N, Assal F. Dopaminergic imaging spearates normal pressure hydrocephalus from its mimics. J Neurol. 2018; 265(10):2434-2441.

American Psychiatric Association. Diagnostic and statistical manual of mental disorders (5th ed.). Washington DC: American Psychiatric Publishing (2013):612-615.

APA Work Group on Alzheimer's Disease and other Dementias, Rabins PV, Blacker D, Rovner BW, Rummans T, Schneider LS, Tariot PN, Blass DM; Steering Committee on Practice Guidelines, McIntyre JS, Charles SC, Anzia DJ, Cook IA, Finnerty MT, Johnson BR, Nininger JE, Schneidman B, Summergrad P, Woods SM, Berger J, Cross CD, Brandt HA, Margolis PM, Shemo JP, Blinder BJ, Duncan DL, Barnovitz MA, Carino AJ, Freyberg ZZ, Gray SH, Tonnu T, Kunkle R, Albert AB, Craig TJ, Regier DA, Fochtmann LJ. American Psychiatric Association practice guideline for the treatment of patients with Alzheimer's disease and other dementias. Second edition. Am J Psychiatry. 2007; 164(12 Suppl):5-56.

Archer HA, Smailagic N, John C, Holmes RB, Takwoingi Y, Coulthard EJ, Cullum S. Regional cerebral blood flow single photon emission computed tomography for detection of frontotemporal dementia in people with suspected dementia. Cochrane Database Syst Rev. 2015; (6):CD010896.

Barrou Z, Boddaert J, Faucounau V, Habert MO, Greffard S, Dieudonne B, Verny M. Utility of 123I-FP-CIT SPECT for dementia diagnoses and therapeutic strategies in elderly patients. J Nutr Health Aging. 2014; 18(1):50-53.

Benedetto N, Gambacciani C, Aquila F, Di Carlo DT, Morganti R, Perrini P. A new quantitative method to assess disproportionately enlarged subarachnoid space (DESH) in patients with possible idiopathic normal pressure hydrocephalus: The SILVER index. Clin Neurol Neurosurg. 2017; 158:27-32.

Bensaidane MR, Beauregard JM, Poulin S, Buteau FA, Guimond J, Bergeron D, Verret L, Fortin MP, Houde M,

Bouchard RW, Soucy JP, Laforce R. Clinical utility of amyloid PET imaging in the differential diagnosis of atypical dementias and its impact on caregivers. J Alzheimers Dis. 2016; 52(4):1251-1262.

Brix MK, Westman E, Simmons A, Ringstad GA, Eide PK, Wagner-Larsen K, Page CM, Vitelli V, Beyer MK. The Evans' Index revisited: New cut-off levels for use in radiological assessment of ventricular enlargement in the elderly. Eur J Radiol. 2017; 95:28-32.

Budson AE, Solomon PR. Corticobaseal degeneration. In AE Budson & PR Solomon (Eds.). Memory Loss, Alzheimer's Disease, and Dementia: A Practical Guide for Clinicians (2nd ed.). Edinburgh, Scotland: Elsevier (2016):119-126.

Cagnin A, Simioni M, Tagliapietra M, Citton V, Pompanin S, Della Puppa A, Ermani M, Manara R. A simplified callosal angle measure best differentiates idiopathic-normal pressure hydrocephalus from neurodegenerative dementia. J Alzheimers Dis. 2015; 46(4):1033-1038.

Canu E, Agosta F, Mandic-Stojmenovic G, Stojkovic T, Stefanova E, Inuggi A, Imperiale F, Copetti M, Kostic VS, Filippi M. Multiparametric MRI to distinguish early onset Alzheimer's disease and behavioral variant of frontotemporal dementia. Neuroimage Clin. 2017; 15:428-438.

Craven CL, Toma AK, Mostafa T, Patel N, Watkins LD. The predictive value of DESH for shunt responsiveness in idiopathic normal pressure hydrocephalus. J Clin Neurosci. 2016; 34:294-298.

Crutch SJ, Lehmann M, Schott JM, Rabinovici GD, Rossor MN, Fox NC. Posterior cortical atrophy. Lancet Neurol. 2012; 11(2):170-178.

de Wilde A, van der Flier WM, Pelkmans W, Bouwman F, Verwer J, Groot C, van Buchem MM, Zwan M, Ossenkoppele R, Yagub M, Kunneman M, Smets EM, Barkhof F, Lammertsma AA, Stephens A, van Lier E, Biessels GJ, van Berckel BN, Scheltens P. Association of amyloid positron emission tomography with changes in diagnosis and patient treatment in an unselected memory clinic cohort: The ABIDE project. JAMA Neurol. 2018; 75(9):1062-1070.

Ding Y, Sohn JH, Kawczynski MG, Trivedi H, Harnish R, Jenkins NW, Lituiev D, Copeland TP, Aboian MS, Mari Aparici C, Behr SC, Flavell RR, Huang SY, Zalocusky KA, Nardo L, Seo Y, Hawkins RA, Hernandez Pampaloni M, Hadley D, Franc BL. A deep learning model to predict a diagnosis of Alzheimer disease by using ^{18}F-FDG PET of the brain. Radiology. 2019; 290(2):456-464.

Donaghy PC, Firbank MJ, Thomas AJ, Lloyd J, Petrides G, Barnett N, Olsen K, O'Brien JT. Clinical and imaging correlates of amyloid deposition in dementia with Lewy bodies. Mov Disord. 2018; 33(7):1130-1138.

Fantoni ER, Chalkidou A, O'Brien JT, Farrar G, Hammers A. A systematic review and aggregated analysis on the impact of amyloid PET brain imaging on the diagnosis, diagnostic confidence, and management of patients being evaluated for Alzheimer's disease. J Alzheimers Dis. 2018; 63(2):783-796.

Fayed N, Modrego PJ, Garcia-Marti G, Sanz-Requena R, Marti-Bonmati L. Magnetic resonance spectroscopy and brain volumetry in mild cognitive impairment. A prospective study. Magn Reson Imaging. 2017; 38:27-32.

Filippi M, Agosta F, Barkhof F, Dubois B, Fox NC, Frisoni GB, Jack CR, Johannsen P, Miller BL, Nestor PJ, Scheltens P, Sorbi S, Teipel S, Thompson PM, Wahlund LO; European Federation of the Neurologic Societies.

EFNS task force: The use of neuroimaging in the diagnosis of dementia. Eur J Neurol. 2012; 19(12):e131-e140.

Fischbach-Boulanger C, Fitsiori A, Noblet V, Baloglu S, Oesterle H, Draghici S, Philippi N, Duron E, Hanon O, Dietemann JL, Blanc F, Kremer S. T1- or T2-weighted magnetic resonance imaging: What is the best choice to evaluate atrophy of the hippocampus? Eur J Neurol. 2018; 25(5):775-781.

Garcia-Armengol R, Domenech S, Botella-Campos C, Goncalves FJ, Menendez B, Teixidor P, Munoz-Narbona L, Rimbau J. Comparison of elevated intracranial pressure pulse amplitude and disproportionately enlarged subarachnoid space (DESH) for prediction of surgical results in suspected idiopathic normal pressure hydrocephalus. Acta Neurochir (Wien). 2016; 158(11):2207-2213.

Gorno-Tempini ML, Hillis AE, Weintraub S, Kertesz A, Mendez M, Cappa SF, Ogar JM, Rohrer JD, Black S, Boeve BF, Manes F, Dronkers NF, Vandenberghe R, Rascovsky K, Patterson K, Miller BL, Knopman DS, Hodges JR, Mesulam MM, Grossman M. Classification of primary progressive aphasia and its variants. Neurology. 2011; 76(11):1006-1014.

Grill JD, Cox CG, Kremen S, Mendez MF, Teng E, Shapira J, Ringman JM, Apostolova LG. Patient and caregiver reactions to clinical amyloid imaging. Alzheimers Dement. 2017; 13(8):924-932.

Health Quality Ontario. The appropriate use of neuroimaging in the diagnostic work-up of dementia: An evidence-based analysis. Ont Health Technol Assess Ser. 2014; 14(1):1-64.

Hort J, O'Brien JT, Gainotti G, Pirttila T, Popescu BO, Rektorova I, Sorbi S, Scheltens P; EFNS Scientist Panel on Dementia. EFNS guidelines for the diagnosis and management of Alzheimer's disease. Eur J Neurol. 2010; 17(10):1236-1248.

Inui Y, Ito K, Kato T; SEAD-J Study Group. Longer-term investigation of the value of 18F-FDG-PET and magnetic resonance imaging for predicting the conversion of mild cognitive impairment to Alzheimer's disease: A multicenter study. J Alzheimers Dis. 2017; 60(3):877-887.

Isaacs AM, Hamilton MG, Williams MA. Idiopathic normal pressure hydrocephalus. In DD Limbrick & JR Leonard (Eds.). Cerebrospinal Fluid Disorders: Lifelong Implications. Cham, Switzerland: Springer Nature Switzerland AG (2018):219-235.

Johnson KA, Minoshima S, Bohnen NI, Donohoe KJ, Foster NL, Herscovitch P, Karlawish JH, Rowe CC, Carrillo MC, Hartley DM, Hedrick S, Mitchell K, Pappas V, Thies WH. Appropriate use criteria for amyloid PET: A report of the Amyloid Imaging Task Force (AIT), the Society of Nuclear Medicine and Molecular Imaging (SNMMI) and the Alzheimer Association (AA). Alzheimers Dement. 2013; 9(1):e1-16.

Kobayashi S, Makino K, Hatakeyama S, Ishii T, Tateno M, Iwamoto T, Tsujino H, Kawasaki K, Mikuni K, Ukai W, Murayama T, Hashimoto E, Utsumi K, Kawanishi C. The usefulness of combined brain perfusion single-photon emission computed tomography, Dopamine-transporter single-photon emission computed tomography, and ^{123}I-metaiodobenzylguanidine myocardial scintigraphy for the diagnosis of dementia with Lewy bodies. Psychogeriatrics. 2017; 17(4):247-255.

Kockum K, Lilja-Lund O, Larsson EM, Rosell M, Soderstrom L, Virhammar J, Laurell K. The idiopathic normal-pressure hydrocephalus Radscale: A radiological scale for structured evaluation. Eur J Neurol. 2018; 25(3):569-576.

Kojoukhova M, Koivisto AM, Korhonen R, Remes AM, Vanninen R, Soininen H, Jaaskelainen JE, Sutela A, Leinonen V. Feasibility of radiological markers in idiopathic normal pressure hydrocephalus. Acta Neurochir (Wien). 2015; 157(10):1709-1718.

Kramer J, Lueg G, Schiffler P, Vrachimis A, Weckesser M, Wenning C, Pawlowski M, Johnen A, Teuber A, Wersching H, Meuth SG, Duning T. Diagnostic value of diffusion tensor imaging and positron emission tomography in early stages of frontotemporal dementia. J Alzheimers Dis. 2018; 63(1):239-253.

Laforce R, Buteau JP, Paquet N, Verret L, Houde M, Bouchard RW. The value of PET in mild cognitive impairment, typical and atypical/unclear dementias: A retrospective memory clinic study. Am J Alzheimers Dis Other Demen. 2010; 25(4):324-332.

Lan MJ, Ogden RT, Kumar D, Stern Y, Parsey RV, Pelton GH, Rubin-Falcone H, Pradhaban G, Zanderigo F, Miller JM, Mann JJ, Devanand DP. Utility of molecular and structural brain imaging to predict progression from MCI to dementia. J Alzheimers Dis. 2017; 60(3):939-947.

Langa KM, Levine DA. The diagnosis and management of mild cognitive impairment: A clinical review. JAMA. 2014; 312(23):2551-2561.

LeCouteur DG, Doust J, Creasey H, Brayne C. Political drive to screen for pre-dementia: Not evidence based and ignores the harms of diagnosis. BMJ. 2013;347:f5125.

Martinez G, Vernooij RW, Fuentes Padilla P, Zamora J, Bonfill Cosp X, Flicker L. 18F PET with florbetapir for the early diagnosis of Alzheimer's disease dementia and other dementias in people with mild cognitive impairment (MCI). Cochrane Database Syst Rev. 2017; 11:CD012216.

McKeith IG, Boeve BF, Dickson DW, Halliday G, Taylor JP, Weintraub D, Aarsland D, Galvin J, Attems J, Ballard CG, Bayston A, Beach TG, Blanc F, Bohnen N, Bonanni L, Bras J, Brundin P, Burn D, Chen-Plotkin A, Duda JE, El-Agnaf O, Feldman H, Ferman TJ, Ffytche D, Fujishiro H, Galasko D, Goldman JG, Gomperts SN, Graff-Radford NR, Honig LS, Iranzo A, Kantarci K, Kaufer D, Kukull W, Lee VM, Leverenz JB, Lewis S, Lippa C, Lunde A, Masellis M, Masliah E, McLean P, Mollenhauer B, Montine TJ, Moreno E, Mori E, Murray M, O'Brien JT, Orimo S, Postuma RB, Ramaswamy S, Ross OA, Salmon DP, Singleton A, Taylor A, Thomas A, Tiraboschi P, Toledo JB, Trojanowski JQ, Tsuang D, Walker Z, Yamada M, Kosaka K. Diagnosis and management of dementia with Lewy bodies: Fourth consensus report of the DLB Consortium. Neurology. 2017; 89(1):88-100.

McKhann GM, Knopman DS, Chertkow H, Hyman BT, Jack CR, Kawas CH, Klunk WE, Koroshetz WJ, Manly JJ, Mayeux R, Mohs RC, Morris JC, Rossor MN Scheltens P, Cerrillo MC, Thies B, Weintraub S, Phelps CH. The diagnosis of dementia due to Alzheimer's disease: Recommendation from the National Institute on Aging-Alzheimer's Association workgroups on diagnostic guidelines for Alzheimer's disease. Alzheimers Dement. 2011;7(3):263-269.

Meyer S, Mueller K, Stuke K, Bisenius S, Diehl-Schmid J, Jessen F, Kassubek J, Kornhuber J, Ludolph AC, Prudlo J, Schneider A, Schuemberg K, Yakushev I, Otto M, Schroeter ML; FTLDc Study Group. Predicting behavioral variant frontotemporal dementia with pattern classification in multi-center structural MRI data. Neuroimage Clin. 2017; 14:656-662.

Mishima A, Nihashi T, Ando Y, Kawai H, Kato T, Ito K, Terasawa T. Biomarkers differentiating dementia with Lewy bodies from other dementias: A meta-analysis. J Alzheimers Dis. 2016; 50(1):161-174.

Miskin N, Patel H, Franceschi AM, Ades-Aron B, Le A, Damadian BE, Stanton C, Serulle Y, Golomb J, Gonen O, Rusinek H, George AE; Alzheimer's Disease Neuroimaging Initiative. Diagnosis of normal-pressure hydrocephalus: Use of traditional measures in the era of volumetric MR imaging. Radiology. 2017; 285(1):197-205.

Moonis G, Subramaniam RM, Trofimova A, Burns J, Bykowski J, Chakraborty S, Holloway K, Ledbetter LN, Lee RK, Pannell JS, Pollock JM, Powers WJ, Roca RP, Rosenow JM, Shih RY, Utukuri PS, Corey AS. ACR Appropriateness Criteria® Dementia. American College of Radiology; 2019. Available from https://acsearch.acr.org/docs/3111292/Narrative.

Mori E, Ishikawa M, Kato T, Kazui H, Miyake H, Miyajima M, Nakajima M, Hashimoto M, Kuriyama N, Tokuda T, Ishii K, Kaijma M, Hirata Y, Saito M, Arai H; Japanese Society of Normal Pressure Hydrocephalus. Neurol Med Chir (Tokyo). 2012; 52(11):775-809.

National Institute for Health and Clinical Excellence (NICE). Dementia: Assessment, management and support for people living with dementia and their carers. National Guideline Alliance (UK). London: National Institute for Health and Care Excellence (UK); 2018.

National Institute on Aging. Types of frontotemporal disorders. 2017. Retrieved from: https://www.nia.nih.gov/health/types-frontotemporal-disorders

Ossenkoppele R, Rabinovici GD, Smith R, Cho H, Scholl M, Strandberg O, Palmgvist S, Mattsson N, Janelidze S, Santillo A, Ohlsson T, Jogi J, Tsai R, La Joie R, Kramer J, Boxer AL, Gorno-Tempini ML, Miller BL, Choi JY, Ryu YH, Lyoo CH, Hansson O. Discriminative accuracy of [18F]flortaucipir positron emission tomography for Alzheimer disease vs other neurodegenerative disorders. JAMA. 2018; 320(11):1151-1162.

Petersen RC, Lopez O, Armstrong MJ, Getchius TS, Ganguli M, Gloss D, Gronseth GS, Marson D, Pringsheim T, Day GS, Sager M, StevensK, Rae-Grant A. Practice guideline update summary: Mild cognitive impairment: Report of the Guideline Development, Dissemination, and Implementation Subcommittee of the American Academy of Neurology. Neurology. 2018; 90(3):126-135.

Quaranta D, Gainotti G, Di Giuda D, Vita MG, Cocciolillo F, Lacidogna G, Guglielmi V, Masullo C, Giordano A, Marra C. Predicting progression of amnesic MCI: The integration of episodic memory impairment with perfusion SPECT. Psychiatry Res Neuroimaging. 2018; 271:43-49.

Rabinovici GD, Gatsonis C, Apgar C, Chaudhary K, Gareen I, Hanna L, Hendrix J, Hillner BE, Olson C, Lesman-Segev OH, Romanoff J, Siegel BA, Whitmer RA, Carrillo MC. Association of amyloid positron emission tomography with subsequent change in clinical management among Medicare beneficiaries with mild cognitive impairment or dementia. JAMA. 2019; 321(13):1286-1294.

Ries ML, Carlsson CM, Rowley HA, Sagger MA, Gleason CE, Asthana S, Johnson SC. Magnetic resonance imaging characterization of brain structure and function in mild cognitive impairment: A review. J Am Geriatr Soc. 2008; 56(5):920-934.

Rinne JO, Wong DF, Wolk DA, Leinonen V, Arnold SE, Buckley C, Smith A, McLain R, Sherwin PF, Farrar G, Kailajarvi M, Grachev ID. [(18)F]Flutemetamol PET imaging and cortical biopsy histopathology for fibrillar amyloid B detection in living subjects with normal pressure hydrocephalus: Pooled analysis of four studies. Acta Neuropathol. 2012; 124(6):833-845.

Scottish Intercollegiate Guidelines Network (SIGN). Management of patients with dementia: A national clinical guideline. 2006. Edinburgh: Scottish Intercollegiate Guidelines Network.

Shea YF, Barker W, Greig-Gusto MT, Loewenstein DA, Duara R, DeKosky ST. Impact of amyloid PET imaging in the memory clinic: A systematic review and meta-analysis. J Alzheimers Dis. 2018; 64(1):323-335.

Smailagic N, Lafortune L, Kelly S, Hyde C, Brayne C. 18F-FDG PET for prediction of conversion to Alzheimer's disease dementia in people with mild cognitive impairment: An updated systematic review of test accuracy. J Alzheimers Dis. 2018; 64(4):1175-1194.

Smailagic N, Vacante M, Hyde C, Martin S, Ukoumunne O, Sachpekidis C. ^{18}F-FDG-PET for the early diagnosis of Alzheimer's disease dementia and other dementias in people with mild cognitive impairment (MCI). Cochrane Database Syst Rev. 2015; 1:CD010632.

Sorbi S, Hort J, Erkinjuntti T, Fladby T, Gainotti G, Gurvit H, Nacmias B, Pasquier F, Popescu BO, Rektorova I, Religa D, Rusina R, Rossor M, Schmidt R, Stefanova E, Warren JD, Scheltens P; EFNS Scientist Panel on Dementia and Cognitive Neurology. EFNS-ENS Guidelines on the diagnosis and management of disorders associated with dementia. Eur J Neurol. 2012; 19(9):1159-1179.

Stamelou M, Oertel WH. Progressive supranuclear palsy. In C Falup-Pecurariu, J Ferreira, P Martinez-Martin, & KR Chaudhuri (Eds.). Movement Disorders Curricula. Wien, Austria: Springer-Verlag Wien (2017):193-202.

US Preventive Services Task Force. Screening for cognitive impairment in older adults. US Preventive Services Task Force recommendation statement. JAMA. 2020; 323(8):757-763.

Wikler EM, Blendon RJ, Benson JM. Would you want to know? Public attitudes on early diagnostic testing for Alzheimer's disease. Alzheimers Res Ther. 2013; 5(5):43.

Zhang S, Smailagic N, Hyde C, Noel-Storr AH, Takwoingi Y, McShane R, Feng J. (11) C-PIC-PET for the early diagnosis of Alzheimer's disease dementia and other dementias in people with mild cognitive impairment (MCI). Cochrane Database Syst Rev. 2014; (7):CD010386.

Zwan MD, Bouwman FH, Konijnenberg E, van der Flier WM, Lammertsma AA, verhey FR, Aalten P, van Berckel BN, Scheltens P. Alzheimers Res Ther. 2017; 9(1):2.