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主な研究課題・発表論文

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**主な研究課題**

- 腹部 MRI の T1 マッピングにおける脂肪の影響および最適撮像法に関する検討
- 腹部 MR 画像における超解像再構成技術を用いたノイズ除去および超解像画像の検討
- Dual energy ダイナミック造影 CT を用いた肝臓のヨード量に関する検討
- 呼吸停止下の拡散強調像を用いた肝腫瘍の描出能に関する検討
- Exsper を用いた拡散強調像における肝悪性腫瘍の画質評価に関する検討
- 選択的 IR パルス併用 cine-dynamic MRCP を用いた胆汁や膵液の流れに関する検討
- 高分解能 CT・MRI を用いた胆嚢癌疑診例の術前画像診断に関する検討
- マルチパラメトリック MRI を用いた糖尿病患者の膵イメージングに関する検討
- 局所励起を用いた拡散強調像の膵癌画質評価に関する研究
- CT 画像を用いた膵臓脂肪蓄積の定量に関する検討
- CT を用いた腎臓体積と腎機能や患者背景との関連性の検討
- 超高精細 CT による胃壁構造や胃癌深達度の描出能に関する検討
- 唾液腺基底細胞腺腫の MRI 画像所見の検討（多形腺腫、ワルチン腫瘍との比較）
- 充実成分を有する原発性肺腺癌の CT 解析
- Spread through air spaces (STAS)の有無による原発性肺腺癌の CT 所見の比較検討
- 動態 X 線撮影を用いた心胸郭比（cardio-thoracic ratio: CTR）に関する検討
- AI（人工知能）による肺結節検出機能を用いた肺動静脈奇形の検出の有用性に関する検討

**発表論文**

1. Tanabe M, Higashi M, Tanabe M, et al: Automated whole-volume measurement of CT fat fraction of the pancreas: correlation with Dixon MR imaging. Br J Radiol 96: 20220937, 2023.
2. Miyoshi K, Tanabe M, Ihara K, et al: Dual-Source Contrast-Enhanced Multiphasic CT of the Liver Using Low Voltage (70 kVp): Feasibility of a Reduced Radiation Dose and a 50% of Contrast Dose. Tomography 9: 1568-1576, 2023.
3. Kawano Y, Tanabe M, Kameda F, et al: Lobar hepatic steatosis: Association with portal flow hemodynamics evaluated by multiphasic dynamic contrast-enhanced CT. Eur J Radiol 160: 110688, 2023.

4. Inoue A, Tanabe M, Ihara K, et al: Evaluation of diffusion-weighted magnetic resonance imaging of the rectal cancers: comparison between modified reduced field-of-view single-shot echo-planar imaging with tilted two-dimensional radiofrequency excitation pulses and conventional full field-of-view readout-segmented echo-planar imaging. Radiol Med 128: 1192-1198, 2023.
5. Ihara K, Onoda H, Tanabe M, et al: Breath-hold High-resolution T1-weighted Gradient Echo Liver MR Imaging with Compressed Sensing Obtained during the Gadoxetic Acid-enhanced Hepatobiliary Phase: Image Quality and Lesion Visibility Compared with a Standard T1-weighted Sequence. Magn Reson Med Sci, 2023.
6. Higashi M, Tanabe M, Yamane M, et al: Impact of fat on the apparent T1 value of the liver: assessment by water-only derived T1 mapping. Eur Radiol 33: 6844-6851, 2023.
7. Tanabe M, Onoda H, Higashi M, et al: Three-Dimensional (3D) Breath-Hold Zoomed MR Cholangiopancreatography (MRCP): Evaluation of Additive Value to Conventional 3D Navigator Triggering MRCP in Patients With Branch Duct Intraductal Papillary Mucinous Neoplasms. J Magn Reson Imaging 55: 1234-1240, 2022.
8. Tanabe M, Kunihiro Y, Higashi M, et al: Pancreatic Steatosis Evaluated by Automated Volumetric CT Fat Fraction of the Pancreas: Association with Severity in COVID-19 Pneumonia. Tomography 8: 2806-2814, 2022.
9. Onoda H, Tanabe M, Higashi M, et al: Assessment of gastric wall structure using ultra-high-resolution computed tomography. Eur J Radiol 146: 110067, 2022.
10. Kunihiro Y, Tanaka N, Kawano R, et al: High-resolution CT findings of pulmonary infections in patients with hematologic malignancy: comparison between patients with or without hematopoietic stem cell transplantation. Jpn J Radiol 40: 791-799, 2022.
11. Higashi M, Tanabe M, Yonezawa T, et al: The pancreatic exocrine function in patients with pancreatic endocrine insufficiency: the evaluation with cine-dynamic magnetic resonance cholangiopancreatography using a spatially selective inversion-recovery pulse and T1 mapping. Jpn J Radiol 40: 696-702, 2022.
12. Higashi M, Tanabe M, Ihara K, et al: Bile Flow Dynamics in Patients with Cholelithiasis: An Evaluation with Cine-Dynamic Magnetic Resonance Cholangiopancreatography Using a Spatially Selective Inversion-Recovery Pulse. Tomography 8: 815-823, 2022.
13. Tanabe M, Tanabe M, Furukawa M, et al: Assessment of the relationship between the hepatic contrast enhancement effect in the hepatobiliary phase and hepatic signal changes in free-breathing continuous multiphasic dynamic EOB-MRI. Eur J Radiol 144: 109959, 2021.
14. Tanabe M, Higashi M, Yonezawa T, et al: Feasibility of high-resolution magnetic resonance imaging of the liver using deep learning reconstruction based on the deep learning denoising technique. Magn Reson Imaging 80: 121-126, 2021.
15. Tanabe M, Higashi M, Iida E, et al: Transient respiratory motion artifacts in multiple arterial phases on abdominal dynamic magnetic resonance imaging: a comparison using gadoxetate disodium and gadobutrol. Jpn J Radiol 39: 178-185, 2021.
16. Tanabe M, Higashi M, Benkert T, et al: Reduced Field-of-View Diffusion-Weighted Magnetic

Resonance Imaging of the Pancreas With Tilted Excitation Plane: A Preliminary Study. J Magn Reson Imaging 54: 715-720, 2021.

17. Onoda H, Higashi M, Murakami T, et al: Correlation between pleural tags on CT and visceral pleural invasion of peripheral lung cancer that does not appear touching the pleural surface. Eur Radiol 31: 9022-9029, 2021.
18. Kunihiro Y, Tanaka N, Kawano R, et al: Differentiation of pulmonary complications with extensive ground-glass attenuation on high-resolution CT in immunocompromised patients. Jpn J Radiol 39: 868-876, 2021.
19. Kameda F, Tanabe M, Higashi M, et al: The extracellular volume fraction of the pancreas measured by dual-energy computed tomography: The association with impaired glucose tolerance. Eur J Radiol 141: 109775, 2021.
20. Ihara K, Onoda H, Tanabe M, et al: Hemodynamic changes of abdominal organs after CT colonography with transrectal administration of CO2: evaluation with early-phase contrast-enhanced dynamic CT. Jpn J Radiol 39: 900-906, 2021.
21. Higashi M, Tanabe M, Ihara K, et al: Pancreatobiliary Flow Dynamics: Association Between Bile and Pancreatic Juice Evaluated With Cine-Dynamic Magnetic Resonance Cholangiopancreatography Using Spatially Selective Inversion Recovery Pulse. J Magn Reson Imaging 54: 1902-1911, 2021.