

Editöre Mektup/Letter to the Editor

Leveraging GPT-4o in Interventional Radiology: Evaluating Efficacy in Interpreting Standards of Practice

Girişimsel Radyolojide GPT-4o'dan Yararlanma: Uygulama Standartlarının Yorumlanmasında Etkinliğin Değerlendirilmesi

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Dear Editor,

The field of interventional radiology has seen the establishment of standards of practice guidelines by the Cardiovascular and Interventional Radiological Society of Europe (CIRSE). These articles, although written in different styles, prominently feature sections on indications, contraindications, and key recommendations, which are the primary areas of interest for readers. To aid interventional radiologists in obtaining clear and quick results during the pre-procedural preparation phase, large language models can be particularly useful.

In the article related to “Portal Vein Embolization and Double Vein Embolization/Liver Venous Deprivation” questions were asked to assess the next step in a case involving a patient with a resectable appearance on computed tomography, who had previously received chemotherapy, and had a future liver remnant (FLR) to total liver volume ratio of 25% (Bilhim, Böning, and Guiu, 2024). Upon suggesting support with advanced functional testing, it was specified that the mebrofenin hepatobiliary scintigraphy uptake was 6.5%/min. Initially, portal vein embolization (PVE) was recommended, with hepatic vein embolization suggested if PVE was insufficient. If adequate FLR volume was achieved, a right or left hepatectomy could be performed. When asked what should be used for the PVE procedure, it efficiently listed access materials, embolic agents, and post-procedure management.

In the article related to “Carotid Artery Stenting” when asked about the management of an asymptomatic patient with 85% stenosis in the right internal carotid artery and 80% stenosis

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in the left internal carotid artery, it concluded that carotid artery stenting was necessary (Spiliopoulos, Blanc, and Gandini, 2024). Upon inquiring about the optimal materials to be used during the procedure, it briefly discussed access methods, guidewires, balloon catheters, stent characteristics, and peri-procedural medication.

In both scenarios created from the articles, all steps were logically and succinctly explained. However, some shortcomings and the omission of certain procedural risks indicate that it is not entirely reliable. Nonetheless, it has the potential to facilitate information retrieval from articles, even for case scenarios, for interventional radiologists.

References

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- Spiliopoulos, S., Blanc, R., Gandini, R., Müller-Hülsbeck, S., Reith, W., & Moschovaki-Zeiger, O. (2024). CIRSE Standards of Practice on Carotid Artery Stenting. *Cardiovascular and interventional radiology*, 47(6), 705–716. <https://doi.org/10.1007/s00270-024-03707-y>