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Letters to the editor

Letter to the editor—Opinion on article by Rodriguez-Alvarez F et al.



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Santiago Rodríguez Villafuerte^{a,b*} Giacomo Balbinotto Netto^c Ajacio Brandão^d

^aDepartment of Hepatology, Hospital Vozandes Quito-HVQ, Av. Juan José de Villalengua Oe2-37, Quito 170521, Ecuador ^bDirectorate of Postgraduate Studies in Health Sciences, Universidad de las Américas, Vía a Nayón, Quito 170124, Ecuador

^cGraduate Program in Economics, Universidade Federal do Rio Grande do Sul (UFRGS). Instituto de Avaliações de Tecnologias e Saúde (IATS),

^dGraduate Program in Medicine: Hepatology, Universidade Federal de Ciências da Saúde de Porto Alegre, Rua Sarmento Leite, 245, Centro, 90050-170 Porto Alegre, RS, Brazil

> *Corresponding author. E-mail address: santy_rodri03@yahoo.com (S. Rodríguez Villafuerte).

To the Editor.

We read with great interest the article by Rodriguez-Alvarez F et al. titled "Limited utility of routine bone scintigraphy in the staging of patients with hepatocellular carcinoma: A cross-sectional study [1]. The authors retrospectively assessed the utility of bone scintigraphy (BS) in the staging of 192 patients with hepatocellular carcinoma (HCC). They concluded that routine BS in HCC staging demonstrated a low yield, suggesting that BS may be justified for liver transplant (LT) candidates "outside conventional criteria." However, they did not clearly define what constitutes these outside conventional criteria.

Previous studies indicate that the frequency of bone metastasis (BM) in patients with early-stage HCC - those potentially eligible for liver transplant wait-list (WL) inclusion - is approximately 2 % [2,3]. Therefore, even for patients being considered for WL inclusion, BS seems unnecessary and not cost-effective.

In our own cohort, we assessed 259 patients with HCC who met the Milan Criteria and underwent BS as part of the protocol for WL inclusion [4]. BS was suggestive of BM in only one case $(0.4\,\%)$, where the patient presented with severe low back pain. Both the bone scan and subsequent focused imaging were interpreted as suspicious for BM, and the diagnosis was confirmed by biopsy.

Additionally, we analyzed the costs associated with performing BS and the subsequent imaging studies to investigate areas identified as abnormal by BS. The total cost of evaluating 258 patients with negative BS results was USD 39,144, averaging USD 151.72 per patient. Thus, the economic burden of detecting a single case of bone metastasis amounted to USD 39,296.

We also identified a comparator group of patients who had not undergone BS prior to LT. Demographic, clinical, and HCC characteristics (as assessed on explant analysis), as well as follow-up duration, were similar in both groups. The five-year recurrence rates after LT were 10.7 % in patients who underwent BS and 10.1% in those who did not, with no significant difference between the groups.

It is also important to consider that the EASL does not include routine bone scintigraphy in the pre-transplant evaluation of patients with HCC [5].

In conclusion, whole-body BS does not appear to be warranted in patients with early-stage HCC who are candidates for curative treatment unless there is clinical suspicion of extrahepatic disease.