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## Reply to “Vitamin D deficiency and HCV chronic infection: What comes first?”

To the Editor:

We thank Dr. Bitetto *et al.* for their interest in our study recently published in the *Journal of Hepatology* [1]. In this study, we reported a high prevalence of severe vitamin D deficiency in patients with chronic hepatitis C, even in the absence of significant liver fibrosis. We found that vitamin D deficiency was associated with failure to achieve a sustained virologic response (SVR) to therapy of chronic hepatitis C with pegylated interferon- $\alpha$  and ribavirin. Bitetto *et al.* have now accentuated the important question, whether vitamin D deficiency is caused by hepatitis C virus (HCV) infection, or whether vitamin D deficiency may confer an enhanced susceptibility to chronic HCV infection. We believe that this question cannot be finally answered at the moment. In our study, we reported a slight increase of 25-hydroxyvitamin D serum levels from baseline to week 24 after completion of antiviral therapy in those patients who achieved a SVR. As highlighted by Bitetto *et al.* and others [2,3], we have made an attempt to stratify the patients included in this sub-analysis according to the season in which serum samples for vitamin D measurement were taken. In detail, 50% of patients started therapy in winter/spring and SVR was ascertained in summer/autumn, which was vice versa in the remaining 50% of patients. Meanwhile, we have also re-analyzed our complete cohort according to the season when baseline serum samples for vitamin D detection were taken. Although we observed slightly lower baseline 25-hydroxyvitamin D serum levels in patients who started therapy in winter/spring compared to summer/autumn (mean 16.6 and 18.7 ng/ml,  $p = 0.054$ ), severe vitamin D deficiency ( $<10$  ng/ml) was associated with chronic HCV infection during all seasons (26% vs. 19% in winter/spring vs. summer/autumn, respectively, compared to 20% vs. 6% in winter/spring vs. summer/autumn samples in our non-HCV infected control group). In addition, season had no significant influence on SVR rates. Nevertheless, we fully agree with Bitetto *et al.* that our observations do not prove that HCV infection itself can cause vitamin D deficiency. In addition to a residual season influence, factors such as changes in life-style or eating habits may contrib-

ute to the increase of vitamin D serum levels after successful HCV eradication. To resolve the “what comes first” question results of basic research on a potential interplay between HCV infection and vitamin D metabolism, as well as additional clinical data from large and well defined patient cohorts are required.

### Conflict of interest

The authors declared that they do not have anything to disclose regarding funding or conflict of interest with respect to this manuscript.

### References

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## Tips for portal vein thrombosis (pvt) in cirrhosis: Not only unblocking a pipe

To the Editor:

Han *et al.* recently published a case series of patients with cirrhosis who had developed portal and splanchnic vein thrombosis at various intervals from treatment with transjugular intrahepatic portosys-

temic shunt (TIPS), for complications of the resulting portal hypertension [1]. We are pleased that they confirmed our published findings that TIPS is feasible and effective in patients with PVT, including those with cavernous transformation of the portal vein [2].