Response

NGR and isoDGR are separate moieties binding to different receptors

The letter by Rizzardi and Bordignon refers to work from a group that has greatly contributed to our understanding of NGR binding and binding of deamidation product isoDGR to different binding sites.[1] We agree with their hypothesis. Indeed, we claim that in our in vitro experiments tTF-NGR binds to CD13 and, after partial deamidation, the resulting molecule binds to αvβ3. We have indicated this in the manuscript and do not wish to claim that tTF-NGR without deamidation can bind to αvβ3. In addition, we have performed no binding studies with ex vivo material.

Our experiments were not designed to quantify deamidation or to determine the distribution of binding to the different binding sites in vitro or in vivo. We agree that it is of interest in future studies to test deamidation kinetics of tTF-NGR in different situations to quantify the amount of isoDGR in the material. The focus of our paper, however, is to characterize a molecule that, by targeting tumor vessels and preferentially causing thrombosis in these vessels, can have in vivo antitumor activity. tTF-NGR is one molecule in a series[2,3] produced and studied in our laboratory. For first studies of human tumors we have selected tTF-NGR because in our experiments with xenograft models, this molecule has shown very consistent antitumor effects.

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Conflict-of-interest disclosure: The authors declare no competing financial interests.

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