Letter to the Editor

Clinical Cancer Research

Intraarterial Treatment of GEP NET: ^{68}Ga-DOTATOC SUV Cannot Predict ^{90}Y-DOTATOC Uptake

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Kratochwil and colleagues (1) demonstrate in their very elegant study that selective intraarterial (i.a.) application of ^{68}Ga-DOTATOC into the feeding artery of liver metastases from neuroendocrine tumors leads to a significantly higher SUV compared with intravenous (i.v.) application. An advantage of their study is the absence of therapeutic interventions as a confounding factor. This is a limitation in other studies comparing different therapeutic approaches as it commonly restricts recruitment of suitably large, homogeneous patient groups.

However, we do not believe that these data can be extrapolated to suggest a higher tumor uptake or a greater therapeutic efficacy of ^{90}Y- or ^{177}Lu-DOTATOC following i.a. application.

Following our previously reported experience with i.a. application of ^{131}I-MIBG (2), we have so far treated 5 patients with ^{90}Y-DOTATOC intravenously, followed by i.a. treatment 6 months later. We could not observe a consistently higher tumor uptake following i.a. application. Intraarterial-to-intravenous uptake ratios varied widely in our patients, from 0.45 to 2.74.

We are aware that ours is a very small group of patients, but due to the markedly different receptor affinities of ^{68}Ga-DOTATOC and ^{90}Y-DOTATOC we do not expect a significantly greater tumor uptake following i.a. application of ^{90}Y-DOTATOC.

Heppeler and colleagues (3) showed that SSR2 receptor affinity of ^{67}Ga-DOTATOC was 4 to 5 times higher than that of ^{90}Y- and ^{111}In-DOTATOC, respectively. In their study, ^{67}Ga-DOTATOC showed a significantly higher tumor and lower renal uptake than the other 2 compounds. These data lead us to conclude that, in contrast to ^{68}Ga-DOTATOC, a significantly higher tumor uptake after i.a. application cannot be expected for ^{90}Y-DOTATOC.

Disclosure of Potential Conflicts of Interest

No potential conflicts of interest were disclosed.

Received July 22, 2010; accepted August 16, 2010; published OnlineFirst March 29, 2011.

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doi: 10.1158/1078-0432.CCR-10-1970

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