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DSA Used as Mask, not Map

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Letters

DSA Used as Mask, not Map

In reply to the letter by Turski et al. [1] in the July/August 1984 issue of *AJNR* concerning our article on real-time digital subtraction angiography (DSA) [2], we assure the authors that their work is well known to us and has not gone unnoticed. We did not reference their articles, however, because our work describes a completely different application of DSA that has nothing to do with "road mapping."

Our technique involves the use of a second-order real-time subtraction as a mask, thus normalizing the background to a single level of gray, rendering it homogeneous in appearance (see our fig. 1B) [2]. Upon injection of contrast (or embolic) material, only vascular structures and their contents are visible in real time. Thus, we fluoroscope in a completely subtracted mode (see fig. 1C) [2]. We do not use the opacified vascular structure as a mask, as reported by Turski et al. [3], and thus make no use of a road map. In addition, we use this technique for different purposes, as detailed in our article, from those described by Turski et al. [3], and, as such, we saw no

reason for referencing their work, nor do we understand their objection to our article on a use of DSA not previously described.

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REFERENCES

1. Turski PA, Strother CM, Crummy AB. Digital subtraction angiography "road map" (letter). *AJNR* **1984**;5:490
2. Braun IF, Aiken RE, Spalding WW, Hoffman JC Jr, Chandler S. Real-time fluoroscopic digital subtraction. *AJNR* **1984**;5:214-215, *AJR* **1984**;142:1050-1051
3. Turski PA, Stieghorst MF, Strother CM, Crummy AB, Lieberman RP, Mistretta CA. Digital subtraction angiography "road map." *AJR* **1982**;139:1233-1234