RESPONSE

Response

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We would like to thank Diprose and colleagues for their insightful comments on the double-edged sword that is represented by intracranial reserve. They pose the poetic conundrum: “is the skull half-full or half-empty?” We would respond that, like Schrödinger’s Cat, the skull could be both at the same time. That is, greater intracranial reserve may certainly reflect cerebral atrophy and biologic aging, serving as a marker of impaired resiliency with respect to eventual functional recovery after large-vessel stroke [1]. In parallel but conversely, lower intracranial reserve was a clear marker of higher risk for malignant cerebral edema in our and two other recent studies [2–4]. We would argue that one concern, however valid, does not negate the other. The clinician caring for a stroke patient, especially one with proximal arterial occlusion, must be concerned both about a large stroke progressing to malignant edema and how well that same patient may recover, if they survive the acute period.

The focus of our analysis was purely on predicting the risk of deterioration from edema. Preemptively triaging those at high risk for deterioration to closer monitoring and possible surgical intervention is necessary to ensure survival and permit any chance of recovery from stroke. Those with little reserve appear to be at higher risk and bear such close monitoring, at least for 24–48 h. We suggest that repeat CT imaging at that time may assist in further risk stratification and surgical decision making. It appears that, in much the same way that was shown for atrophy and stroke outcome, measuring intracranial reserve provides a better surrogate of biologic risk than chronological age itself. We agree, however, that if these

generally younger patients with less atrophy survive the acute swelling period, their chances of good recovery are better than older stroke patients with greater cerebral atrophy in whom concerns for malignant edema are substantially attenuated.

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