SUPPLEMENTAL FIGURE:
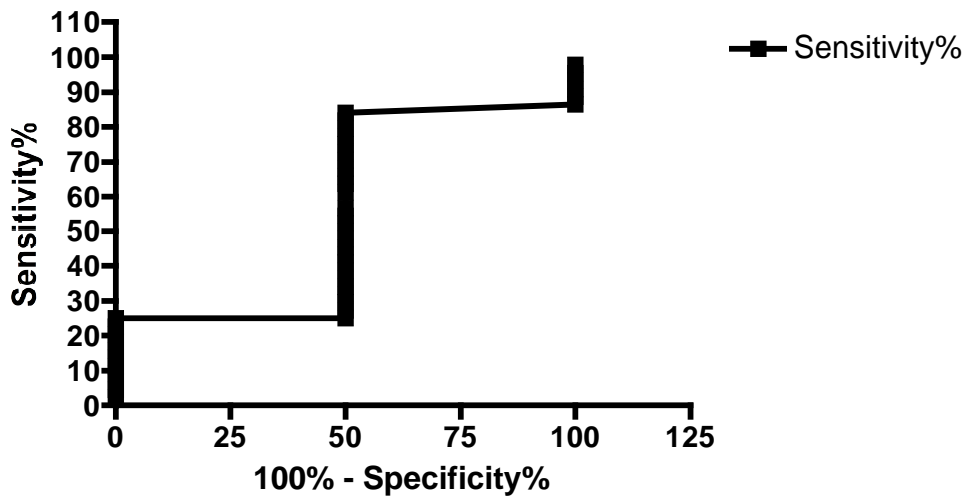
ROC analysis for localization using the fold response at the dominant artery:

CaStim Localization Confirmed By Surgical Localization

		Confirmed	Not Confirmed	
CaStim	**Positive Test > 2-fold**	*38 (TP)*	*2 (FP)*	*PPV=TP/TP+FP 38/40 = 95%*
	Negative Test < 2-fold	*5 (FN)*	*0 (TN)*	*NPV=TN/TN+FN NPV=0%*
		Sensitivity= TP/TP+FN 38/43=88.4%	*Specificity= TN/TN+FP 0%*	

ROC of Fold Response At Dominant Artery

Cutoff Fold Response at Dominant Artery	Sensitivity%	95% CI	Specificity%	95% CI
> 1.574	**97.73**	**87.98% to 99.94%**	**0**	**0.0% to 84.19%**
> 1.665	95.45	84.53% to 99.44%	0	0.0% to 84.19%
> 1.730	93.18	81.34% to 98.57%	0	0.0% to 84.19%
> 1.790	90.91	78.33% to 97.47%	0	0.0% to 84.19%
> 2.020	**88.64**	**75.44% to 96.21%**	**0**	**0.0% to 84.19%**
> 2.430	86.36	72.65% to 94.83%	0	0.0% to 84.19%
> 2.660	84.09	69.93% to 93.36%	50	1.258% to 98.74%
> 2.715	81.82	67.29% to 91.81%	50	1.258% to 98.74%
> 2.755	79.55	64.70% to 90.20%	50	1.258% to 98.74%
> 2.810	77.27	62.16% to 88.53%	50	1.258% to 98.74%
> 2.920	**75**	**59.66% to 86.81%**	**50**	**1.258% to 98.74%**
> 3.250	72.73	57.21% to 85.04%	50	1.258% to 98.74%
> 3.560	70.45	54.80% to 83.24%	50	1.258% to 98.74%
> 3.795	68.18	52.42% to 81.39%	50	1.258% to 98.74%
> 4.150	65.91	50.08% to 79.51%	50	1.258% to 98.74%
> 4.625	63.64	47.77% to 77.59%	50	1.258% to 98.74%
> 5.135	61.36	45.50% to 75.64%	50	1.258% to 98.74%

Supplemental Figure Legend: Due to the invasive nature of the test, no normal[1] controls have undergone the procedure at NIH (true negative (TN) patients = 0). Only patients with a diagnosis of insulinoma based on a + fast have been studied. Thus, the values for sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) are derived from a population with 100% prevalence for insulinoma. If one defines sensitivity as true positives (TP) divided by the sum of true positives (TP) and false negatives (FN); then the sensitivity for a 2-fold response is 88% (95% confidence interval of 76-96%). In this population the low false negative localization rate of the CaStim, contrasts to the high false negative rates of CT, MRI and trans-abdominal US. Sensitivity/specificity for different cutoff values derived from fitting our data on an ROC curve are given for responses of 1.5-fold to 5-fold [refer to table above]. If the diagnosis of insulinoma is established with a positive fast, then the PPV of the CaStim is 95% for a 2-fold response and 98% for a 3-fold response. Thus in this setting, using a 2-fold cutoff value; the positive CaStim localization will be a true positive localization 95% of the time.

---

[1]

One case of factious hypoglycemia underwent the test

41.   **Hirshberg B, Skarulis MC, Pucino F, Csako G, Brennan R, Gorden P** 2001 *Repaglinide-induced factitious hypoglycemia. J Clin Endocrinol Metab 86:475-477.[1]*

1. **Hirshberg B, Skarulis MC, Pucino F, Csako G, Brennan R, Gorden P** 2001 Repaglinide-induced factitious hypoglycemia. J Clin Endocrinol Metab 86:475-477