

## **Vitreous Levels of Unbound Bevacizumab and Unbound Vascular Endothelial Growth Factors in Two Human Subjects**

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### **PURPOSE**

Determination of vitreous levels of unbound VEGF and unbound bevacizumab in two patients who developed complications after intravitreal bevacizumab injections demonstrate effective intravitreal VEGF blockade for four weeks and an intravitreal bevacizumab half life range of two to six days.

### **METHODS**

The samples of vitreous fluid were analyzed for unbound bevacizumab and unbound VEGF levels using microsphere immunoassays (MIA) targeted for bevacizumab and VEGF.

### **RESULTS**

In the first patient unbound bevacizumab levels were measured to be 0.16% of the loading dose or 500,000 pg/ml. and unbound VEGF concentration was measured to be less than 41 pg/ml four weeks after the bevacizumab injection. In the second patient, 53% of the Bevacizumab loading dose, or 166 million pg/ml were found at 48 hours with a VEGF level of less than 41 pg/ml.

### **CONCLUSION**

A single dose of intravitreal bevacizumab is likely to provide complete intravitreal VEGF blockade for a minimum of four weeks with an intravitreal half life of unbound bevacizumab of two to six days.