



Case #693

## **Personalized Chemotherapy Delivery for Lung Cancer**

Currently, intratumoral therapy for lung cancer is performed with the same dose of drug applied in the same manner for all tumors regardless of tumor size or other characteristics, and with little guidance as to how and where to inject. This computational model makes predictions of the optimal location, means of delivery, delivery rate and dose for delivery of chemo based on tumor specific imaging and tissue information, such as tissue and blood vessel density. With this information the provider has the capability to make rational decisions to maximize drug effectiveness, improve treatment efficacy and reduce side effects, in effect, personalizing the chemotherapy delivery.

### **Applications:**

- Intratumoral therapy for lung cancers.

### **Advantages:**

- Increases drug effectiveness and treatment efficacy.
- Decreases side effects.
- Reduces empirical decision making.
- Personalized chemotherapy delivery.

### **Intellectual Property and Development Status:**

PCT Application WO2019032757A1

Licensing and research collaborations available.

### **Reference:**

Cisplatin Pharmacodynamics Following Endobronchial Ultrasound-Guided Transbronchial Needle Injection into Lung Tumors. Mori V *et al* Sci Rep. 2019 May 2;9(1):6819.

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