Cross section of one axis in the Gantry shows an assembly of RF guns with nano second signals which penetrate only resonating cells to induce cellular nanopermeabilization, non-invasively. This protocol allows for extremely accurate QMR dosing for who were administered protocol-driven chemotherapy under routine standard of care management. The combination of chemotherapy with FORN significantly reduced drug-mediated effect on tumors of several cancer types, including medulloblastoma, recurrent adult glioblastoma, metastatic breast, ovarian, recurrent metastatic nasopharyngeal carcinoma and relapsed metastatic osteosarcoma; in patients

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**Abstract**

**CytoFORN™ enabled Nano-permeabilization**

Advancements in biotechnology and computerized imaging technologies have expanded the therapeutic capabilities of traditional cancer treatments. The novel CytoFORN™ technology leverages advanced radiofrequency (RF) wave technology to selectively permeabilize tumor cells, allowing targeted delivery of chemotherapy drugs directly into the cell. This non-invasive approach minimizes collateral damage to healthy tissues while enhancing the efficacy of cancer therapies. The technology operates at safe, non-ionizing frequencies, ensuring patient safety.

**Methods**

- **Chemotherapy scheduling before FORN:**
  - Tumor targeting and dosing is determined from high resolution imaging techniques, ensuring precise delivery of chemotherapy.
  - Dosing is calculated to achieve optimal drug concentration within target lesions.

- **Chemotherapy delivery after FORN:**
  - Radiotherapy following nano-permeabilization is coordinated to exploit the enhanced drug delivery, resulting in improved therapeutic outcomes.

**Clinical Investigation Plan (CIP):**

- **Targeting:**
  - Specific targeting algorithms are employed to deliver drugs to specific cells or tissues.
  - Drug delivery is initiated simultaneously at multiple sites to maximize treatment efficiency.

- **Surveillance:**
  - Continuous monitoring of drug delivery and tumor response using advanced imaging techniques.
  - Patient outcomes are evaluated post-treatment using PET-CT scans.

**PET-CT analysis after treatment:**

- FORN-enabled chemotherapy shows superior drug accumulation in the targeted lesions compared to conventional chemotherapy.

**Results**

- **Overview:**
  - FORN-enabled chemotherapy leads to improved clinical outcomes with reduced side effects.
  - Enhanced drug delivery results in better tumor response rates.

- **Dose planning & simulation:**
  - FORN technology enables precise drug delivery planning to target specific areas.
  - Proton delivery is directed to specific tumor locations, minimizing damage to surrounding tissues.

- **Forn-enabling chemotherapy advantage:**
  - FORN-enabled chemotherapy achieves superior cancer cell permeabilization, leading to enhanced drug efficacy.

**Technology Background & Objectives**

- **Targeted therapies**
  - FORN-enabled chemotherapy targets specific tumor locations, offering precise drug delivery.
  - Reduced side effects compared to traditional chemotherapy.

- **Clinical applications**
  - FORN technology is effective against a wide range of tumor types, including medulloblastoma, glioblastoma, breast, ovarian, nasopharyngeal, and osteosarcoma.

- **Innovative delivery mechanism**
  - FORN technology uses high-frequency waves to induce cell permeabilization.
  - Drug delivery is precise and targeted, leading to improved therapeutic outcomes.

**Primary Objectives**

- **Enhancing therapeutic efficacy:**
  - FORN technology improves drug delivery to targeted lesions, enhancing therapeutic outcomes.
  - Reduced collateral damage to healthy tissues.

- **Patient compliance:**
  - Enhanced drug delivery leads to improved patient compliance with treatment regimens.
  - Reduced side effects contribute to better patient quality of life.

- **Quality of life improvements:**
  - FORN technology offers a non-invasive approach to cancer treatment, improving patient quality of life.
  - Reduced hospital stays and medication requirements.

**Conclusion**

FORN technology represents a significant advancement in cancer therapy, offering a non-invasive, targeted approach to cancer treatment. The technology's ability to enhance drug delivery and reduce side effects holds promise for improving patient outcomes and quality of life.