

Repurposing a Blood Pressure Drug for the Treatment of Recurrent Chemo-Resistant Ovarian Cancer



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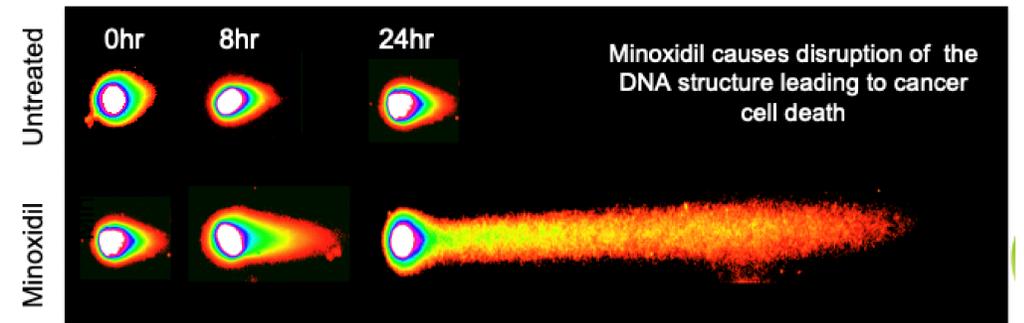
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PROPOSED TREATMENT

Repurposing minoxidil, an FDA-approved drug used to treat hypertension and prevent hair loss, for recurrent platinum-resistant ovarian cancer treatment.

Minoxidil is a readily available drug that has been used clinically worldwide to treat hypertension (oral) and promote hair growth (topical). It has a well-known pharmacological profile with minimal side effects in humans.

Studies have shown that the prognosis of patients with epithelial ovarian cancer with less activity of the potassium channel Kir6.2/SUR2 was worse than patients with high level of the channel. Minoxidil stimulates the activity of Kir6.2/SUR2, giving it potential anticancer benefits. In fact, minoxidil has been found to arrest tumor growth of ovarian cancer in mice by facilitating DNA damage.



SUMMARY STATEMENT

Investigating the safety and efficacy of the oral formulation of minoxidil, approved for hypertension, in treating up to 31 patients with recurrent ovarian cancer that is resistant to platinum-based chemotherapy

DISEASE/CONDITION

Epithelial ovarian cancer is the most lethal among the gynecological cancers. In 2020, an estimated 21,750 new cases and 13,940 deaths will be reported.

Ovarian cancer is usually diagnosed in advanced stage. Patients present with vague symptoms of early satiety, increased abdominal girth, and abdominal pain.

While ovarian cancer is generally treatable with chemotherapy, recurrences are seen in 70% of patients with advanced disease.



CURRENT TREATMENT

Current treatment includes surgery followed by chemotherapy, an expensive and intensive process.

Chemotherapies used to treat ovarian cancer include carboplatin and cisplatin, which cause DNA damage in cancer cells.

Chemoresistance is often seen after initial treatment with these agents.

PROJECT

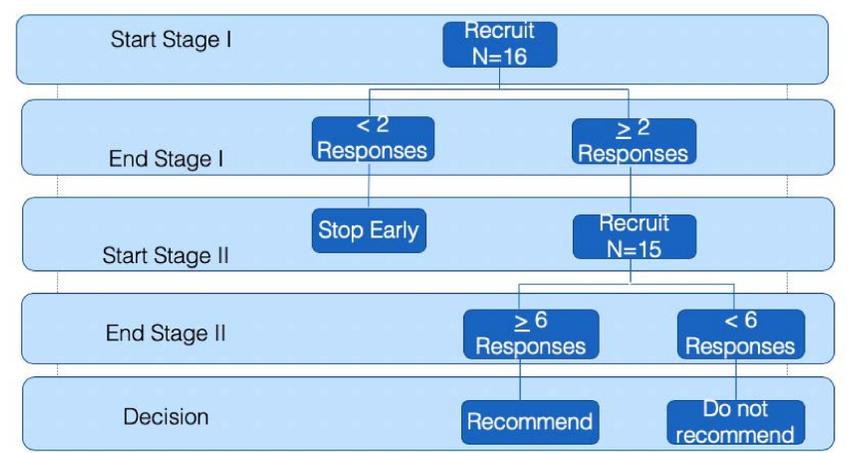
An open-label phase II clinical trial to evaluate the safety and efficacy of minoxidil in patients with recurrent platinum resistant ovarian cancer.

The study will enroll 16-31 women with confirmed recurrent platinum resistant ovarian cancer. Patients will be treated with minoxidil daily for 24 months. The initial starting dose will be 5 mg and will increase over time to determine the most effective and safest dose.

The primary objective of the trial is to evaluate the response rate as defined by complete or partial response seen on CT imaging. The goal is to improve the response rate from the historical average of 10% to 25%.

The secondary aim is to describe the toxicity profile of minoxidil.

This project may lead to a new oral treatment option for recurrent platinum-resistant ovarian cancer that is convenient, cheaper and safer for patients with compromised bone marrow due to primary treatment.



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