



Ribavirin Frequently Asked Questions

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What is ribavirin?

Ribavirin is an old drug that has been used for years to treat serious virus infections like Respiratory Syncytial Virus (RSV) or hepatitis C virus (HCV). There is new human research from McGill University and University of Montréal which shows that ribavirin can safely and successfully treat a type of blood cancer called AML with minimal side effects (*Molecular targeting of the oncogene eIF4E in AML: a proof-of-principle clinical trial with ribavirin, Blood, May 2009*).

What were the trial results?

The first human trial of ribavirin as a cancer treatment was performed in type M4/M5 AML patients. In this trial of 13 patients, 11 could be evaluated for response. A total of 9 out of 11 patients responded to ribavirin (82%), with 4 out of 11 having stable disease (36%), 4 out of 11 showing improvement (36%) and 1 patient with complete remission (9%).

How does it work?

Ribavirin works by interfering with a protein called eIF4E that plays a key role in tumour cell growth, survival, metastasis and angiogenesis (growth of new blood vessels). Ribavirin causes the cancer cells to die and blocks them from growing new blood supply to feed themselves.

Does ribavirin work on any other cancers besides leukemia?

It is exciting to note that extensive research has been done which shows that eIF4E is vital to many other cancers for survival, growth, metastasis and angiogenesis. These include:

- Bladder (transitional cell carcinoma)
- Breast
- Cervix
- Colon
- Glioblastoma
- Head and Neck (squamous cell carcinoma)
- Lung
- Lymphoma
- Prostate

Based on this, we believe that ribavirin will have a role in the treatment of these cancer types, and possibly others as well. This has not yet been established by formal human research. However, we now have preliminary data that shows ribavirin can work in colon cancer synergistically with DCA. This data comes from a ChemoFit test of a single patient. The results showed 5% response to DCA (5% of cancer cells killed), 16% response to ribavirin and 59% response to both drugs combined.

Is it safe?

In the human research noted above, there were no serious side effects reported from ribavirin treatment. The most serious ribavirin side effect reported in the literature is a 10-20% risk of a drop in the blood level due to damage to the red blood cells ("hemolytic anemia"). Since all the research involving ribavirin was conducted in combination with a drug called interferon, it is likely that the combination of these 2 drugs is responsible for the hemolytic anemia. Routine blood tests will detect anemia, and ribavirin can simply be stopped if it develops.

All Medicor patients who receive ribavirin will be closely monitored by our physicians for drug side effects with routine check-ups and comprehensive lab tests.

Why is ribavirin not being used more?

Ribavirin has only undergone 1 clinical trial so far as a cancer treatment (Phase 1/2). Until it clears a Phase 3 trial, it will not be routinely used to treat cancer. Presently, there are no Phase 3 ribavirin trials.

Do I qualify for ribavirin treatment?

Patients with a documented diagnosis of cancer (any type) under the following categories qualify for treatment:

- a. failed conventional, scientifically proven treatments
- b. told by their doctor that there is no safe or effective treatment for their cancer
- c. waiting to start conventional treatment, and would like to do something in the interim
- d. treated for cancer, and would like to prevent recurrence
- e. presently receiving chemotherapy and would like to boost their immune function

Presently, there is some evidence that ribavirin may work well in combination with other treatments. For patients who wish to combine ribavirin with conventional therapies, please ask your doctor to review the literature before making a decision.

There is an increased risk of anemia if ribavirin is combined with chemotherapy, TM, rapamycin or imiquimod. Such combinations may still be used depending on the circumstances, but require close monitoring.

What is the duration of treatment?

In order to determine if ribavirin is effective in treating your cancer, we recommend at least 3 months of treatment. If a patient responds to the drug, their therapy may continue indefinitely.