

Micronutrient synergy—a new tool in effective control of metastasis and other key mechanisms of cancer

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In this publication, we presented scientific evidence of the efficacy of the synergistic nutrient combination and its individual components on key mechanisms of cancer. These in vitro and in vivo study results demonstrated the effects of individual nutrients and their various combinations on growth of various types of cancers, their potential to spread and form metastasis as well as the ability of micronutrients to kill cancer cells.

Individually, vitamin C, green tea extract, quercetin, and many other compounds have some anticancer potential. However, we observed that by using them in synergistic proportions their efficacy increases as well as this combination can attack the malignancy process simultaneously on multiple levels.

When the nutrients were given separately, e.g. the green tea extract alone reduced growth of cancer cells by 35%. When green tea extract was combined with vitamin C, lysine and proline, the cancer cell growth was reduced even more (by 65%). However, when they were combined with other micronutrients the cancer cell growth was inhibited completely (100%). When this synergy combination was provided in animal diets, the tumor incidence was reduced by 68% and the tumor weight was reduced by 78% in the nutrient synergy group as compared to the control or other groups.

Collagen digesting enzymes secreted by cancer cells facilitate the spread of cancer and metastasis. The nutrient synergy combination showed superior inhibition of collagen digesting enzymes, as compared to green tea extract alone. It was effective in decreasing the metastasis to lungs by 86% and to liver by 55%. It also reduced the cancer spread to the spleen and kidneys.

Moreover, this combination of nutrients has also shown to virtually stop multiplication and tissue migration of several types of cancer cells and reduced the secretion of multiple enzymes (uPA, MMPs, TIMPS) that indicated aggressiveness of the cancer. At varying concentrations, the nutrient combination has induced cancer cell death (apoptosis) of many types of cancers, including blood cancers.

In summary, these results show superior efficacy of the nutrient synergy compared to its individual components or their other combinations in affecting key mechanisms of cancer.