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Dr Golombick has had a lifetime interest in cancer, particularly cancers that form in the bone marrow and blood. She received her PhD from the University of the Witwatersrand, Johannesburg, South Africa in 1994. After qualifying as a Nutritionist in Sydney, Australia, she embarked on a number of clinical studies with patients with "watch and wait" cancers of the blood and bone marrow. Her research has shown how certain supplements can improve certain markers of disease progression and immune function in the blood of some patients. The findings of Dr Golombick's research has led to numerous publications.

## Natural medicine compounds for patients with "watch and wait" haematological malignancies

### Introduction / Background

Clinical studies with patients with early haematological malignancies [ie monoclonal gammopathy of undetermined significance (MGUS), smoldering multiple myeloma (SMM), stage 0/1 chronic lymphocytic leukemia (CLL) or early myelodysplasia (low to Int-1 MDS) were carried out in our clinics at St George hospital and Southern Sydney Haematology, Kogarah, Sydney from 2008 until 2016. Patients with these early B-cell lymphoid malignancies are routinely monitored in a "watch and wait" modality with visits to the treating haematologist at 4-6-month intervals. This period can vary in length from months to years and is very stressful for the patient. These patients represent an excellent group to determine whether early intervention with non-toxic nutraceutical agents with known anti-cancer and immune-boosting effects (i.e. curcumin, BioBran (RBAC), 6-shogaol) may be of benefit.

### Methods

Patients with these conditions were administered the relevant nutraceutical (or placebo in some studies) at a prescribed dose depending on the compound. Blood samples were collected at baseline and at 2 monthly intervals for a period of 6 months (up to 9 years in some curcumin studies). Markers monitored for the MGUS/SMM and stage 0/1 CLL patients included FBC, paraprotein, free light chains/ratio, CRP & ESR, B2 microglobulin and immunological markers including serum immunoglobulins (sIgG's) and surface leukocyte markers. Markers monitored for the early MDS patients included full blood count, serum chemistry, liver function, serum iron studies and serum hepcidin levels.

### Discussion / Conclusion

Some patients showed an improvement in markers of disease progression. Taken together, our studies with patients with early haematological malignancies suggest that early intervention with nutraceuticals may lead to prolonged survival and delay in progressive disease in some of these patients. These compounds do not have long-term toxicities as evidenced by the number of patients with stable disease who have been taking these agents for long periods of time. Larger studies are warranted to assess benefits in early haematological malignancies.