# Arsenic Trioxide in the Treatment of Haematological Malignancies

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After graduation from the University of Hong Kong with honors, Dr Au has served at the Department of Medicine for the past 13 years. He completed sabbaticals at Stanford University Medical Center, Royal Infirmary of Edinburgh and British Columbia Cancer Agency, and is currently an attending physician of the lymphoma, leukemia, transplantation and thalassemia services. His research interests include clinical-pathology-molecular correlations, epidemiology and novel treatment agents and algorithms in malignant and non-malignant blood disorders, as well as in marrow transplantation. He has published over 260 papers in international peer reviewed publications.

For over a century, arsenic trioxide (As2O3) in the form of Fowler's solution has been used as a remedy for ailments ranging from syphilis to psoriasis. Before the World War, it was still a standard treatment for cytoreduction for chronic myeloid leukemia. The availability of effective cytotoxics and effects of long term arsenic toxicity has led to its disappearance from medical field. Arsenic trioxide, however, re-emerged before the turn of the century as a highly effective agent for acute promyelocytic leukemia (APL). It has quickly re-established itself as the treatment of choice for relapsed APL and is currently moving into upfront and maintenance treatment. In vitro cell line studies, as well as pilot clinical studies, also showed significant anti-neoplastic effect of As2O3 against a wide variety of other haematological malignancies, ranging from lymphoma, myeloma, to acute and chronic myeloid leukemia and myelodsyplasia. The availability of a patented oral preparation of As2O3 in our institution further simplified the logistics of treatment. We shall briefly review our preliminary experience in terms of efficacy and toxicity in using As2O3 in 160 consecutive patients with haematological malignancies.