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Letter to the Editor NOT referring to a recent journal article

Chemoprevention of Human Prostate Cancer by Green Tea Catechins: Two Years Later. A Follow-up Update

Prostate cancer (CaP) progresses slowly and clinical is usually diagnosed in very elderly men. Delaying disease onset by a few years would reduce incidence, which makes it an ideal target for chemoprevention strategies. We and others showed that both Green Tea Catechin (GTC) and EGCG possess anti-tumour activity *in vitro*, as well as *in vivo* in the TRAMP mouse model [1,2]. We suggested that administration of GTCs might be beneficial in the early stages of cell transformation but not later, when cancer had already developed.

We performed a clinical trial in 60 volunteers bearing HGPIN, the main pre-malignant lesion of CaP, to assess the efficacy of GTCs for chemoprevention, as published [3]. Volunteers consumed GTCs (600 mg per day tid) or placebo for 1 year. Subjects received two follow-up saturation biopsies [4], at 6 months and one year. Only 1 tumour was diagnosed in the GTCs-arm (incidence: 3%), while 9 cancers were found in the placebo-arm (incidence: 30%); no related adverse effects were reported.

Was CaP progression prevented definitively or simply delayed during treatment? We performed another round of prostate mapping in a subset of these patients. The mean follow-up from the end of GTCs dosing was 23.3 months for placebo-arm (range: 12–30) and 19.1 months for GTCs-arm (range: 12–30). Only 9 from the placebo-arm and 13 from the GTCs-arm underwent this third prostate mapping. Despite the high drop–out rate (57% and 55%, respectively), the two arms remained balanced and large enough for statistical analysis.

Figure 1 shows a Kaplan-Meier plot of study data. Three further cancer diagnoses appeared during follow-up, two in the placebo arm and one in the GTCs-arm. The final difference in cancer prevalence is highly significant ($p < 0.01$) by χ^2 test analysis. These results suggest that the inhibition of prostate cancer progression achieved in these subjects after one year of GTCs administration was long-lasting. The early emergence of benefit observed at 6 months suggests a treatment effect on early lesions. Overall, treatment with GTCs led to an almost 80% reduction in CaP diagnosis, from 53% to 11%, suggesting that an important decrease of sanitary costs related to this disease could be achieved [5].

This chemoprevention approach in high risk patients would fulfil a significant therapeutic and social need, thus opening a new scenario for a novel and effective clinical approach for CaP. A larger confirmatory trial of these results is currently underway (Kumar N. et al, Moffitt Cancer Centre, Tampa Fl, USA; personal communication).

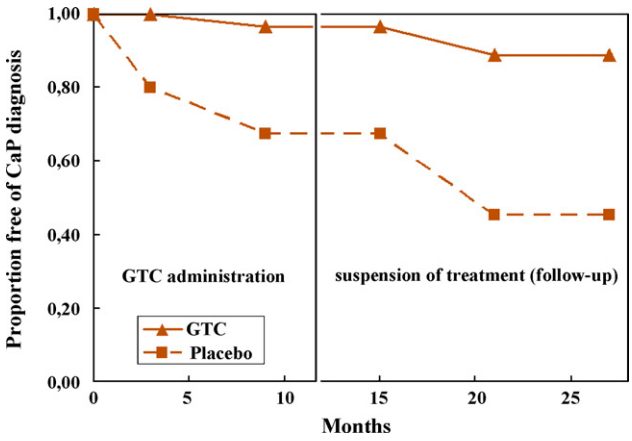

Fig. 1 – Kaplan-Meier analysis of final result showing the prevalence of prostate cancer at 6- and 12-mo check (previous study) as well as 2 years later following suspension of GTC administration (follow-up study).

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Conflicts of interest: The authors have nothing to disclose.

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