

# The use of Gc protein-derived macrophage activating factor for management of thyroid cancer

Sir,

The use of Gc protein-derived macrophage activating factor (GcMAF) for management of cancer is interesting. Basically, Gcprotein is an important precursor of GcMAF which plays important role in the inflammation-primed macrophage activation cascade.<sup>[1]</sup> Mohamad *et al.*, proposed for the success in preparation of GcMAF in 2002.<sup>[1]</sup> The Gcprotein-derived macrophage is approved for “increased macrophage tumoricidal activity”.<sup>[2]</sup> The GcMAF has been mentioned as an effective immunotherapy for some cancers, such as breast cancer<sup>[3]</sup> and prostate cancer,<sup>[4]</sup> for a few years. Here, the authors report a case study on using GcMAF for management of thyroid cancer. The indexed case is a 65-years-old female patient with known thyroid cancer and complete standard treatment for 2 years. On the follow-up visit, the patient revealed persistent increased CA 19-9 (40.3 U/mL) and the thyroid function is as the following: Free triiodothyronine (FT3) = 2.53 pg/mL, free thyroxine (FT4) = 1.01 ng/dL, and thyroid stimulating hormone (TSH) = 1.44 μU/mL. This case received GcMAF, extracted from peptide from human vitamin D receptor protein, at dosage 2,200 ng/0.5 ml intramuscularly weekly for continuous 5 weeks. After complete administration, the reduction of CA 19-9 to 26.42 U/mL could be seen. This might imply that GcMAF might be useful for suppression of tumor marker increasing in the patient with thyroid cancer and complete standard treatment.

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## Conflicts of interest

There are no conflicts of interest.

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## REFERENCES

1. Mohamad SB, Nagasawa H, Uto Y, Hori H. Preparation of Gc protein-derived macrophage activating factor (GcMAF) and its structural characterization and biological activities. *Anticancer Res* 2002;22:4297-300.
2. Mohamad SB, Nagasawa H, Sasaki H, Uto Y, Nakagawa Y, Kawashima K, *et al.* Gcprotein-derived macrophage activating factor (GcMAF): Isoelectric focusing pattern and tumoricidal activity. *Anticancer Res* 2003;23:4451-7.
3. Yamamoto N, Suyama H, Yamamoto N. Immunotherapy for prostate cancer with gc protein-derived macrophage-activating factor, GcMAF. *Transl Oncol* 2008;1:65-72.
4. Yamamoto N, Ushijima N, Koga Y. Immunotherapy of HIV-infected patients with Gc protein-derived macrophage activating factor (GcMAF). *J Med Virol* 2009;81:16-26.

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