

How Korean Red Ginseng could be beneficial for longevity and immune function of HIV-1 patients



Background



Theory

The effect of Korean red ginseng (KRG) on human immunodeficiency virus (HIV):

Progressive loss of CD4+ T cells is the hallmark of HIV infection, and is accompanied by chronic inflammation and chronic immune hyperactivation. Long-term ginseng intake can increase longevity in healthy individuals. Here, we examined if long-term treatment with KRG can also enhance survival duration in patients with HIV-1 infection.



Method

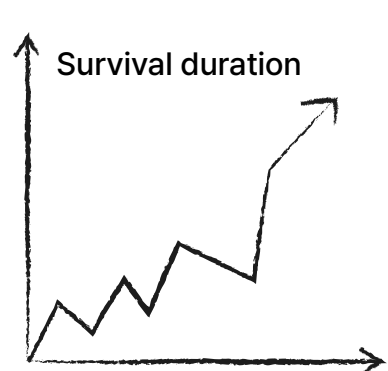
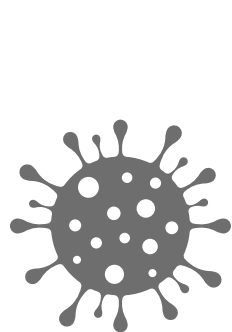
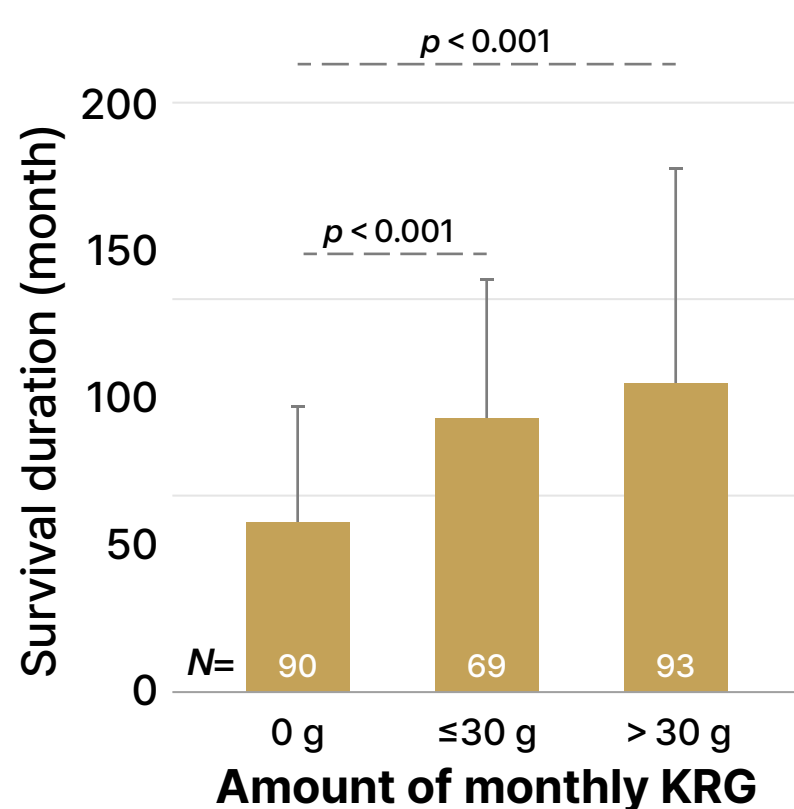
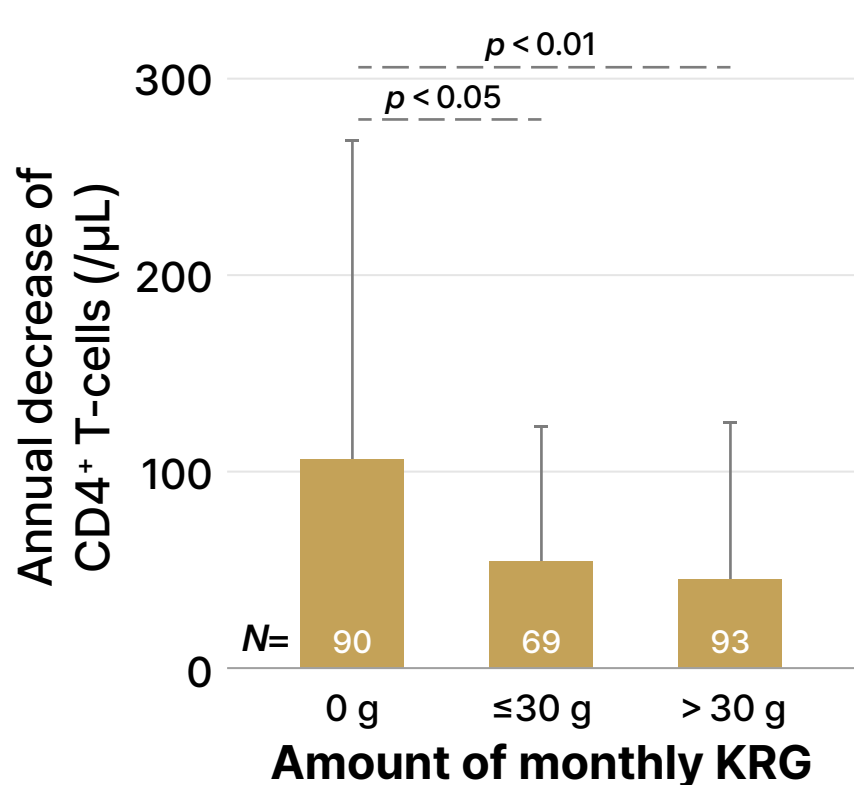
We retrospectively analyzed 252 HIV-1 patients diagnosed from 1986 to 2013 prior to the initiation of antiretroviral therapy. They were instructed to orally take 6 capsules (300 mg/capsule) 3 times a day. Overall, 162 patients were treated with KRG (3,947±4,943 g) for 86±63 months. The effects of KRG on survival duration were analyzed according to the KRG intake level and the length of the follow-up period.



Outcome

With 252 study patients (162 KRG patients, 90 control (non-KRG) patients)

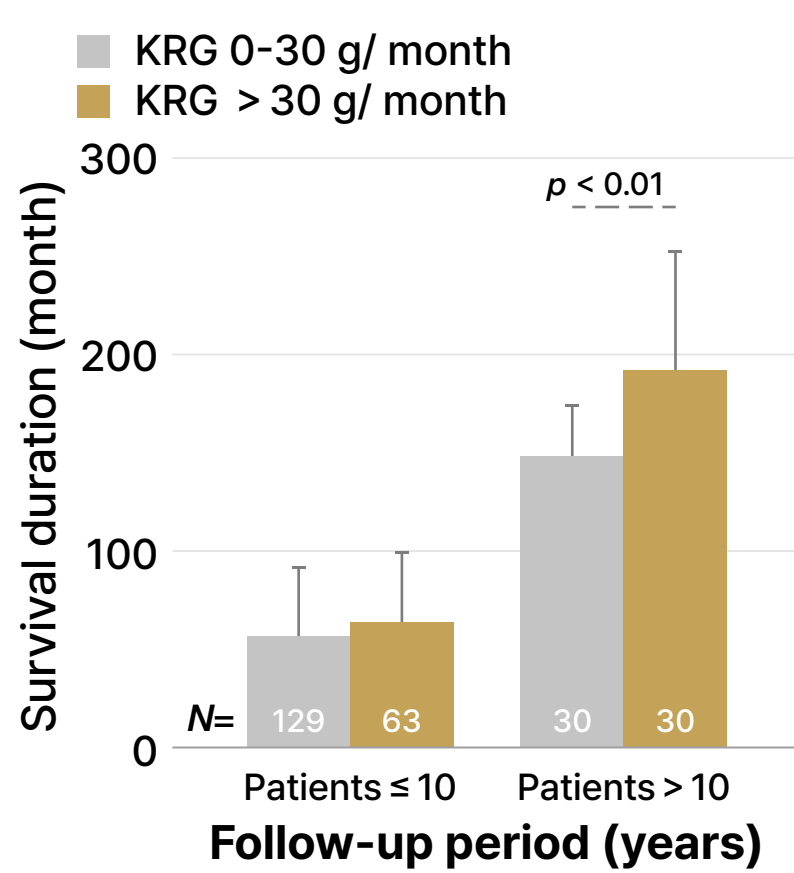
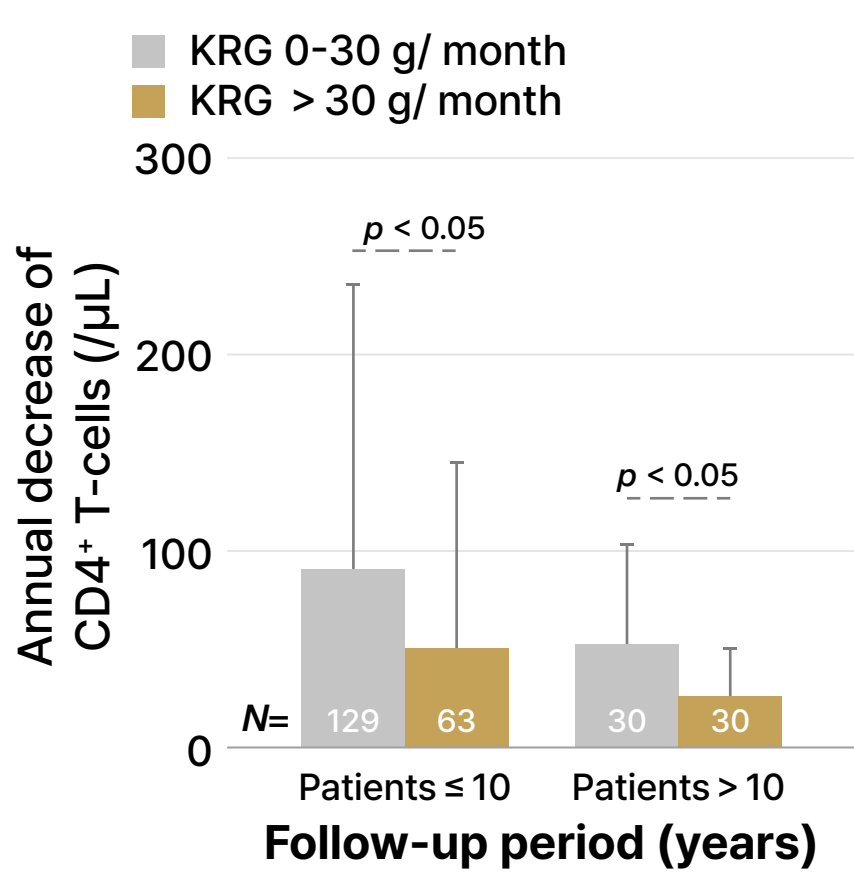
CD4+ T cell & Survival duration



- Annual decrease of CD4+ T cells was significantly slower in the two groups with mKRG intake of ≤ 30 g and > 30 g than in patients with no KRG intake.
- Survival duration was significantly prolonged in the two groups that received KRG (≤ 30 g and > 30 g) compared with the group that did not receive KRG.

Progressive loss of CD4+ T cells is the hallmark of HIV infection. In HIV patients, CD4+ T cells gradually and persistently decrease from the normal level of 800-1,200/mL to 0/mL.

Dose-dependent KRG effect on HIV

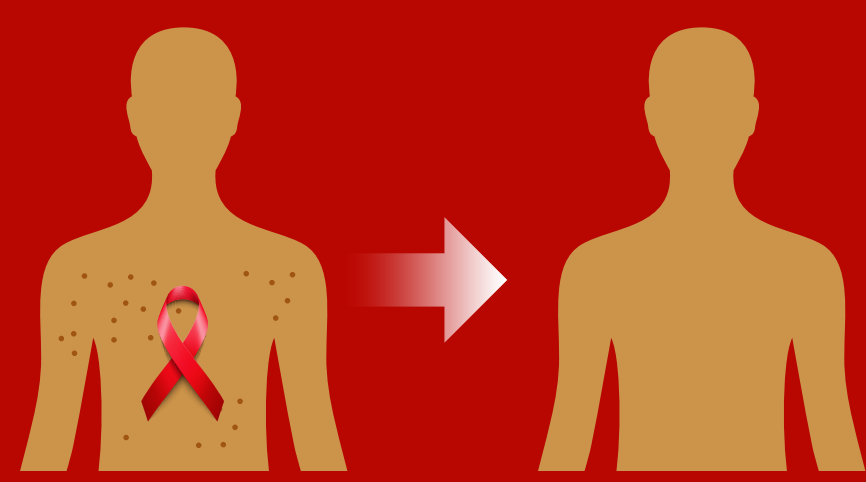


- Annual decrease of CD4+ T cells was significantly faster in the lower KRG intake group.
- Survival duration was prolonged in the higher KRG intake group.

Overall, there were significant correlations between mKRG and both AD ($r=-0.1741, p<0.01$) and survival duration ($r=0.1865, p<0.01$). Furthermore, significant correlations were observed between tKRG and survival duration ($r=0.6390, p<0.0001$) and between tKRG and AD ($r=-0.173, p<0.01$). In contrast to the mKRG intake, the correlation between tKRG and survival duration was also significant in the 162 patients receiving KRG ($r=0.6433, p<0.0001$).

mKRG, monthly amount of KRG; tKRG, total amount of KRG; AD, annual decrease of CD4+ T cells

Impact



Effect of Korean Red Ginseng on HIV-1

Korean red ginseng intake slowed CD4+ T cell count reduction and prolonged survival of HIV-1 patients.

Conclusion

The benefit Korean Red Ginseng for enhancing survival duration and immune function in HIV-1 patients

This study results show that **even moderate Korean red ginseng doses for a sufficient period can improve survival duration in HIV-1 patients not receiving HAART and that efficacy improves with cumulative intake.**