

## NK cell therapy for end-stage cancerous patient: A case study

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Dear Editor,

The management of the end-stage cancerous patient is usually problematic and hopeless. Many advanced management has been introduced within a few recent years.<sup>[1]</sup> An interesting approach is the use of natural killer (NK) cell therapy.<sup>[1-3]</sup> Here, the authors present an experience on using NK cell therapy as an additional cancer treatment in an end-stage cancerous patient. The case is a 62-year-old Thai male patient presenting with stage 4 lung cancer (with metastasis to bone, lymph node, and brain). The patient visited to our medical center for consulting on the problem of dyspnea due to pleural effusion and hoarseness. Before visiting our center, the patient got no specific cancer treatment and had diuretic and pleurocentesis for relief effusion every 2 days. On the first visit, his carcinoembryonic antigen (CEA) was 766.03 ng/ml. In the process, after primary screening for free of infectious disease and immunological problem, blood collection (overall 180 cc) was done, then white blood cell separation and NK cell preparation was performed at referencing laboratory in Japan (New City Osaki Clinic, Tokyo, Japan; [www.nco-clinic.jp/e](http://www.nco-clinic.jp/e)). The process of this auto-NK cell treatment is according to the standard immunotherapy using NK cell.<sup>[4,5]</sup> In the preparation process, NK cell was separated and activated to get the final NK cell solution. The prepared NK cell solution was used for the whole course of treatment given by intravenous administration (drip within 1 h)

every 2 weeks continuously for six times. The patient got the NK cell therapy with dose around  $0.35 \times 10^9$  NK cell per infusion. No additional chemotherapy was given and the radiological investigation for follow-up was done by computed tomography (CT) scan. On three month follow-up, the patient got better quality of life and pleural effusion decreased without requirement of relieving pleurocentesis. The CEA after complete course (six dosages) was 279.10 ng/ml. The present case can show the usefulness of using NK therapy for advanced cancerous patient.

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