How does cisplatin work?

Cisplatin takes the form of a complex ion, specifically, $[Pt\ (Cl)_2(NH_3)_2]^-$.
It is introduced intravenously and is quickly converted into $Pt\ (Cl)(H_2O)(NH_3)_2$, because H_2O is higher on the spectrochemical series than Cl^-, hence it displaces it. This process is dubbed "aquation." Next, the H_2O ligand is displaced by a base on a DNA molecule and the remaining Cl^- is displaced by another base on the antiparallel DNA strand. As a result, DNA cross linkages are formed, leading to apoptosis, thereby eliciting DNA replication and preventing the spread of cancerous tissue.

An interesting paper I read recently proposed a fascinating new way to use cisplatin to treat tumours. It suggested using nanoparticles called patchy particles, which comprised of two sections, a gold layer that is bonded to aquated cisplatin ($Pt\ (Cl)(H_2O)(NH_3)_2$) and a magnetite (Fe_3O_4) layer bonded to a monoclonal antibody that targets a specific antigen expressed on cancer cells. I thought this was particularly interesting because the use of aquated cisplatin certainly increases the efficiency of the treatment. The magnetic properties of Fe_3O_4 would also allow for better tracking of the progress of the nanoparticles through a patient's body.