

Supporting Information

A platinum(IV)-crocetin nanoplatform with intracellular morphological transformation for enhanced colorectal cancer therapy

Xue Rui,^{‡a} Zhetong Jin,^{‡a} Lu Li,^a Jia Liu,^a Jiarong Mao,^b Xuejiao Leng,^a Hongzhi Qiao,^{a,c} Wei Li,^a Lingchong Wang,^a Yugen Chen,^{*b} Jingjing Wang^{*a}

^a College of Pharmacy, Nanjing University of Chinese Medicine, Nanjing, 210023, China

^b The First Clinical Hospital of Nanjing University of Chinese Medicine, Nanjing, 210023, China

^c Jiangsu Key Laboratory of Medicinal Substance and Utilization of Fresh Chinese Medicine, Nanjing, 210023, China

*E-mail: wangjingjing@njucm.edu.cn (J.W)

yugen.chen@njucm.edu.cn (Y.C)

Telephone numbers: +86-189-5188-1585 (J.W)

[‡] These authors contributed equally to this work.

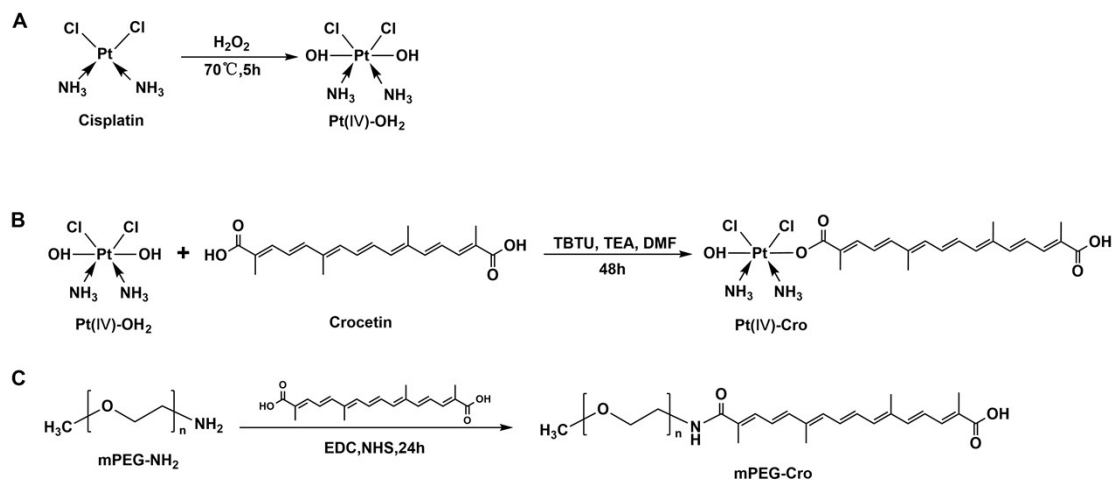


Fig. S1: Synthetic procedures of (A) Pt(IV)-OH₂, (B) Pt(IV)-Cro, (C) mPEG-Cro.

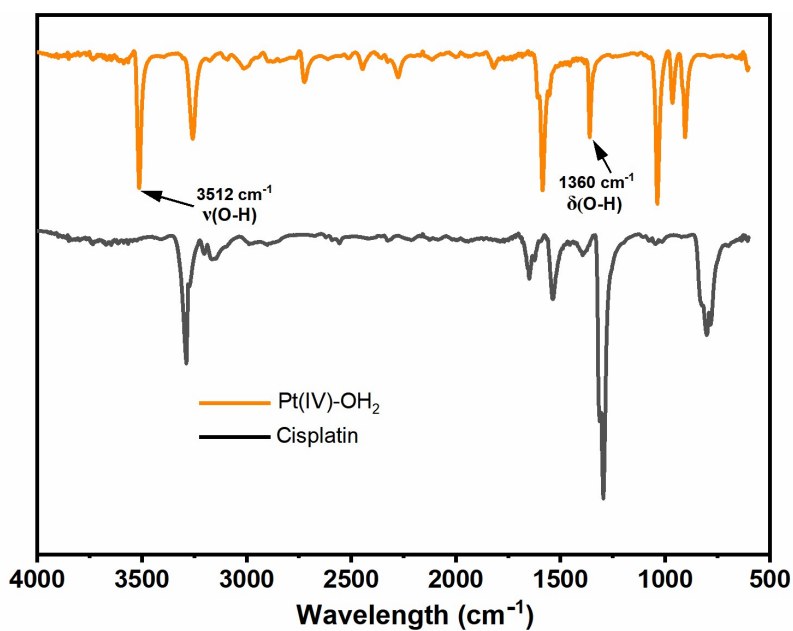


Fig. S2: FT-IR spectra of cisplatin and Pt(IV)-OH₂.

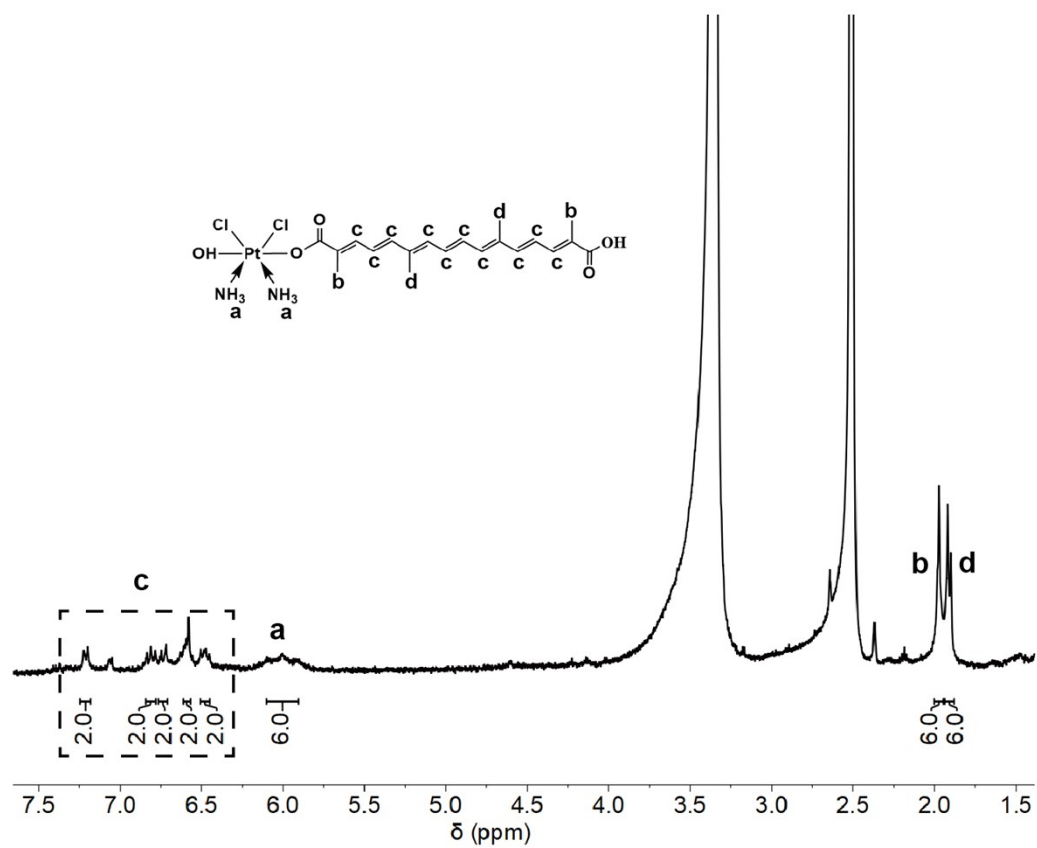


Fig. S3: ^1H NMR spectrum of Pt(IV)-Cro in $\text{DMSO-}d_6$.

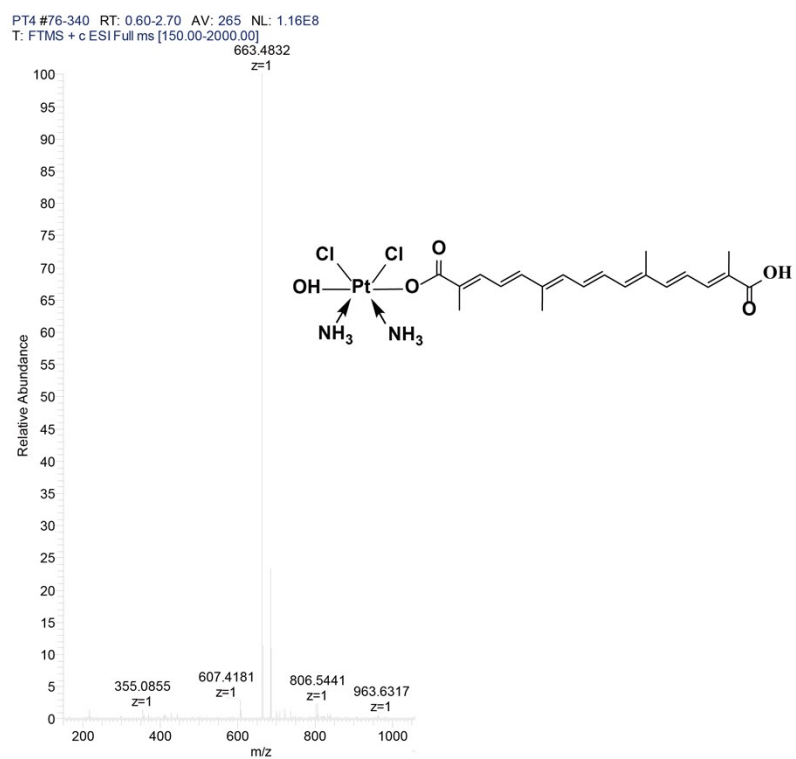


Fig. S4: The ESI-MS spectrum of Pt(IV)-Cro.

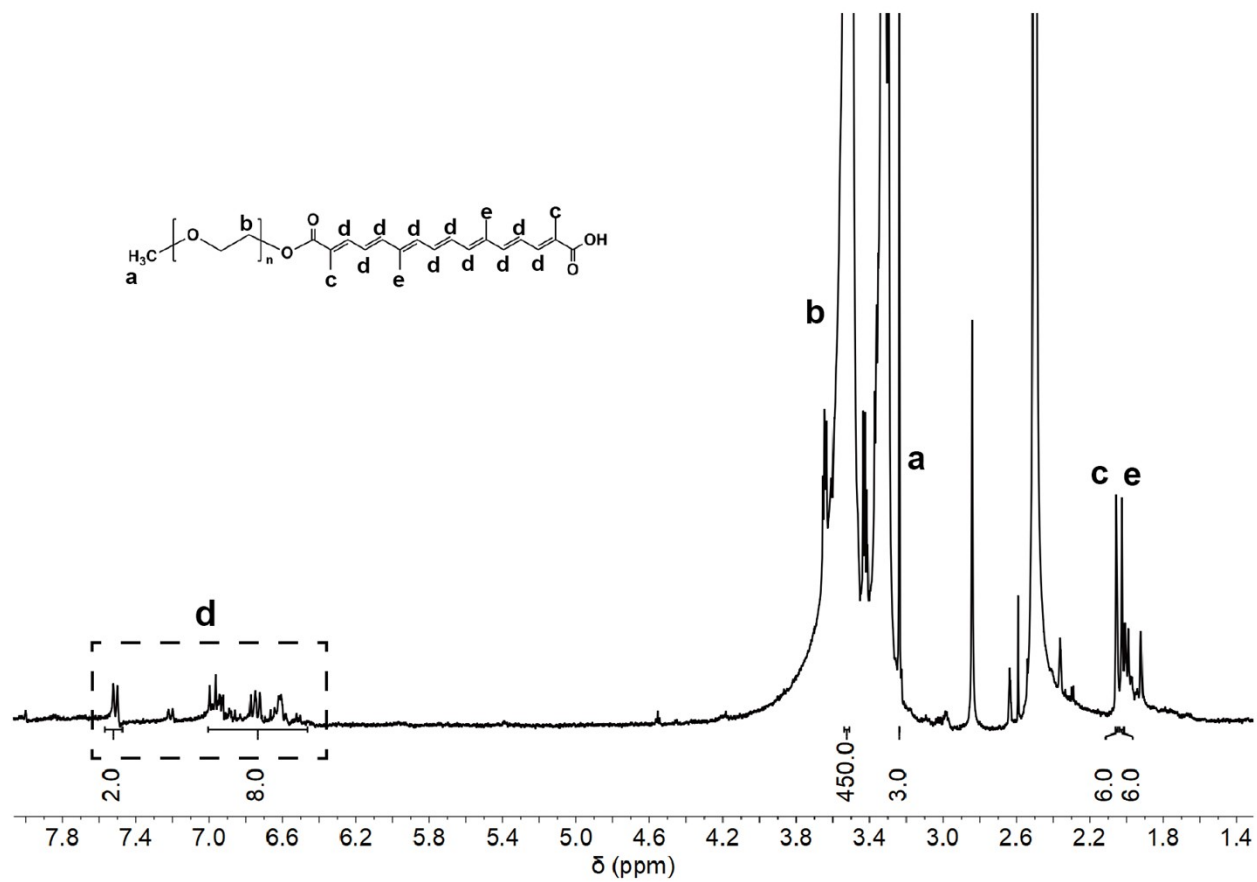


Fig. S5: ¹H NMR spectrum of mPEG-Cro in DMSO-*d*₆.

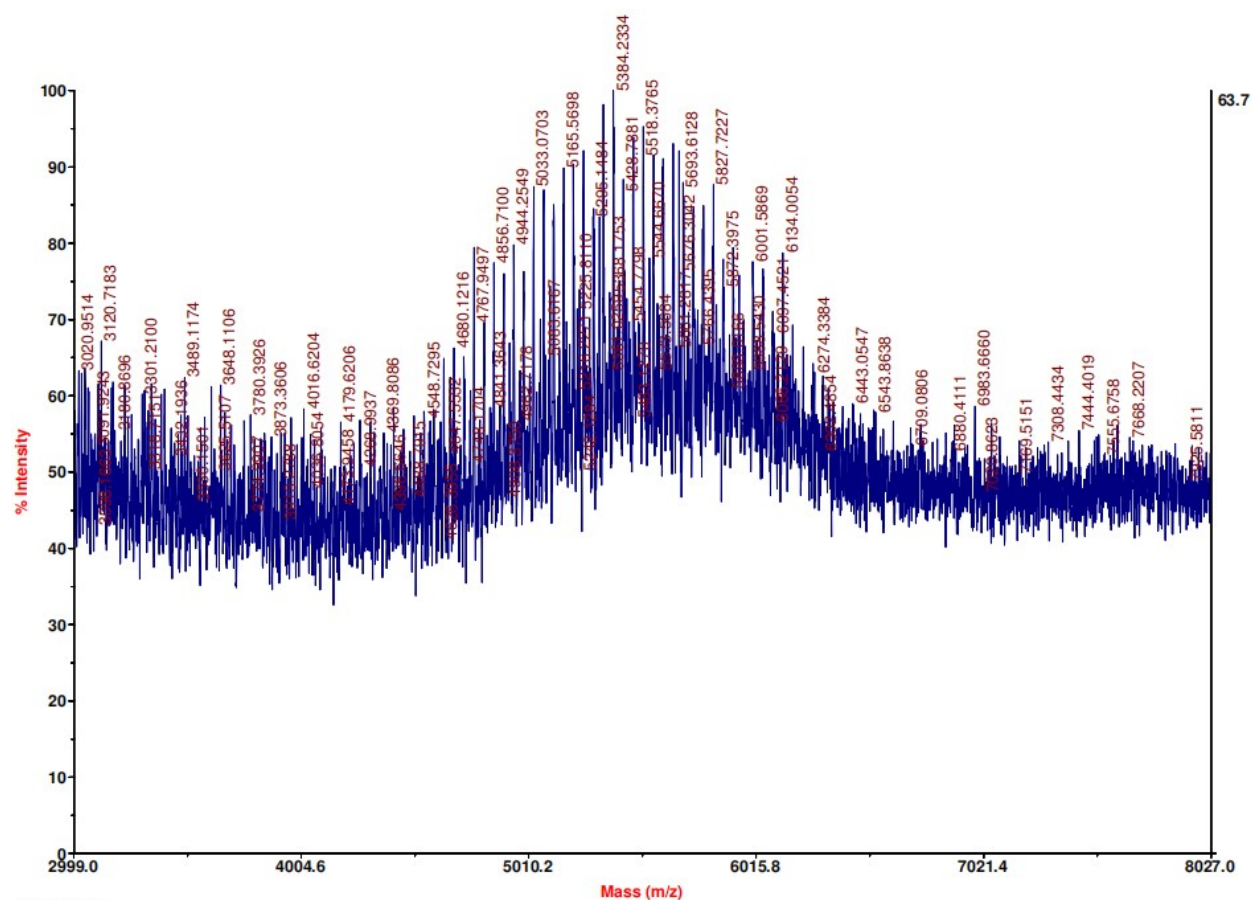


Fig. S6: The MALDI-TOF-MS spectrum of mPEG-Cro.

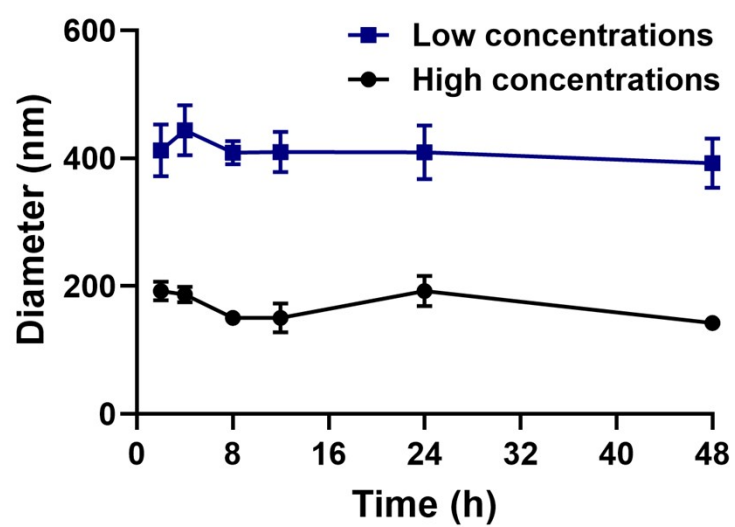


Fig. S7: Stability of low (0.01 mg/mL) and high (0.1 mg/mL) concentrations of Pt(IV)-Cro NPs in 10% FBS. Data are shown as means $\pm$ SD (n=3).

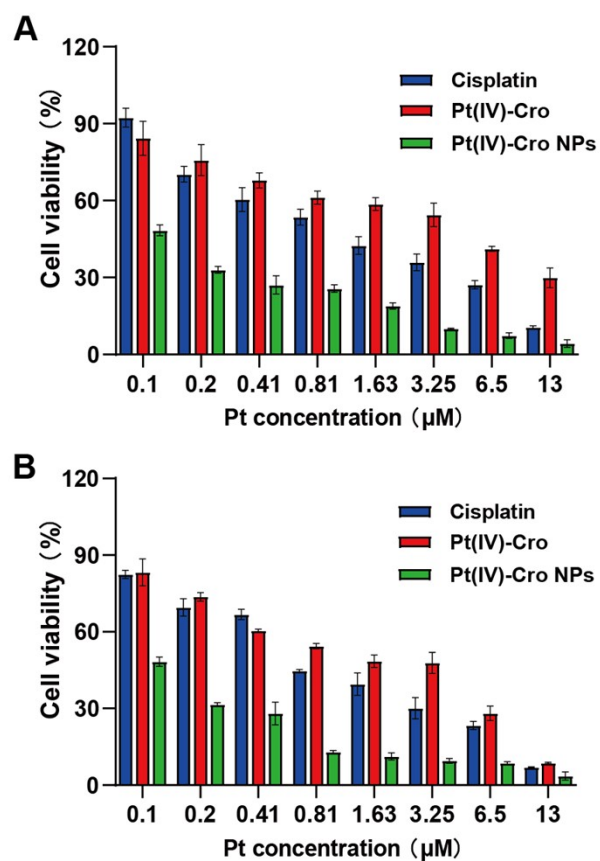


Fig. S8: Cell viability of CT26 cells treated with Cisplatin, Pt(IV)-Cro and Pt(IV)-Cro NPs for 48 h (A) and 72 h (B).

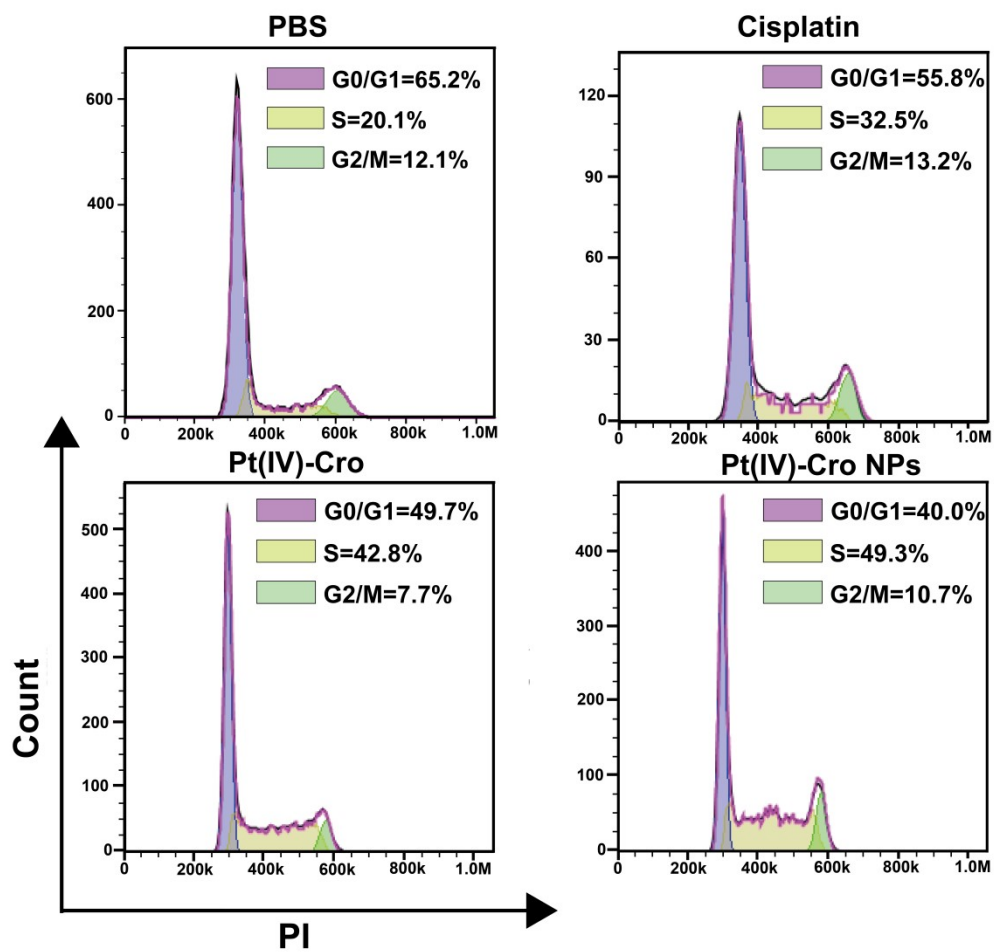


Fig. S9: Cell cycle images of CT26 cells treated with Cisplatin, Pt(IV)-Cro and Pt(IV)-Cro NPs for 24 h.

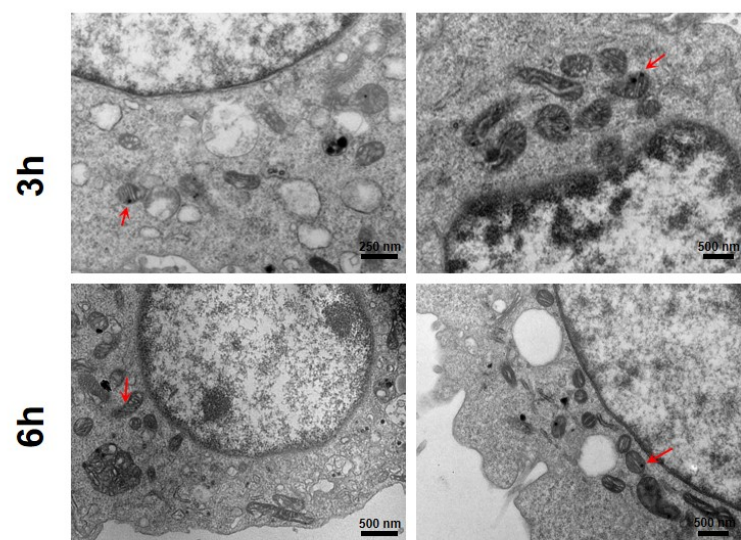


Fig. S10: Bio-TEM of Pt(IV)-Cro NPs in the mitochondria of CT26 cells after drug administration for 3 and 6 h.

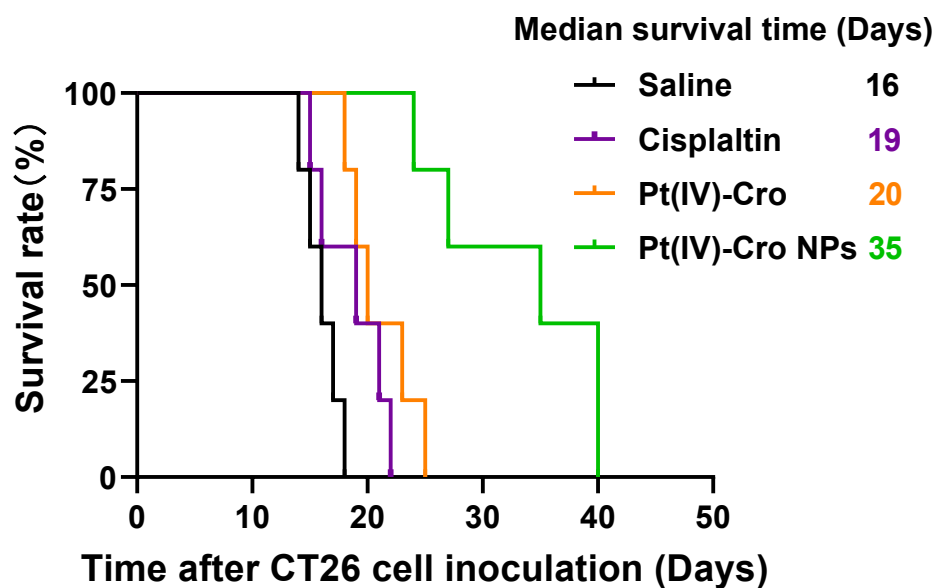


Fig. S11: Survival curves after treatment with PBS, Cisplatin, Pt(IV)-Cro and Pt(IV)-Cro NPs (n = 5).

Table S1. Charaterizations of the Pt(IV)-Cro NPs. The size of Pt(IV)-Cro NPs at day 1, day 4 and day 7 were measured. Data were shown as means $\pm$ SD (n=3).

Days		1	4	7
Low concentration	Size (nm)	324.7 $\pm$ 12.5	365.8 $\pm$ 19.8	328.5 $\pm$ 54.3
High concentration	Size (nm)	158.1 $\pm$ 4.3	147.8 $\pm$ 10.0	140.0 $\pm$ 3.9