

Answer 1:

Bibliographic Information

Antitumor spectrum of deoxyspergualin and its lack of cross-resistance to other antitumor agents. Nishikawa, Kiyohiro; Shibasaki, Chieko; Hiratsuka, Masaharu; Arakawa, Masayuki; Takahashi, Katsutoshi; Takeuchi, Tomio. Res. Lab., Nippon Kayaku Co., Ltd., Tokyo, Japan. *Journal of Antibiotics* (1991), 44(10), 1101-9. CODEN: JANTAJ ISSN: 0021-8820. Journal written in English. CAN 115:270189 AN 1991:670189 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

Antitumor activities of 15-deoxyspergualin (NKT-01), an analog of spergualin (SGL), were examd. in cultured tumor cells, transplantable murine tumors, and human tumor xenografts in nude mice. NKT-01 exhibited strong antitumor activity specifically against leukemias both in vitro and in vivo. Moreover, it also showed activity against AH66F hepatoma, M5076 fibrosarcoma and MH134 hepatoma. However, antitumor activity of NKT-01 against other non-leukemic tumors was marginal. ED range of NKT-01 in sensitive tumors was so wide that the largest chemotherapeutic indexes were produced by NKT-01 in P388 and L1210 leukemias among 15 antitumor agents examd. The efficacy of NKT-01 against doxorubicin- and cytosine arabinoside-resistant P388 leukemias was comparable to that against parental sensitive P388 leukemia. NKT-01 also retained activity against other P388 leukemia sublines resistant to cisplatin, 5-fluorouracil or nimustine, although the effect was slightly decreased. In addn., in the in vitro and in vivo expts. using NKT-01-resistant P388 and SGL-resistant L1210(IMC) leukemias, no cross-resistance was obsd. Moreover, collateral sensitivity was obsd. esp. to alkylating agents in animal study.

Answer 2:

Bibliographic Information

The drug sensitivity of human gastric cancer implanted into the subcutis and stomach wall of nude mice. Yamashita, Takumi. Pathol. Sect. Res. Lab., Nippon Kayaku Co., Ltd., Japan. *Nippon Gan Chiryō Gakkaishi* (1989), 24(3), 611-16. CODEN: NGCJAK ISSN: 0021-4671. Journal written in Japanese. CAN 111:70493 AN 1989:470493 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

This study was designed to establish a model able to predict the clin. efficacy of anticancer agents against cancers of specific organs. Seven-wk old, male nude mice were implanted with 1×10^6 cells of human gastric cancer G/F into either their subcutis or the stomach wall. Fourteen days after the implantation, the mice were injected daily once for 10 days with peplomycin or mitomycin C. Peplomycin was effective on the s.c. tumors with an inhibition rate of 26 and 64% at 1.5 and 6.0 mg/kg, resp. Peplomycin was ineffective on the tumors in the stomach wall. Mitomycin C was ineffective on the s.c. tumors, but effective on the tumors in the stomach wall and the inhibition rate was 52 and 63% at 0.13 and 0.5 mg/kg, resp. Peplomycin and mitomycin C levels in the s.c. tumors were 2-7 times and .apprx.3 times higher than those in the stomach wall, resp. Thus, drug distribution could not explain the differences in drug sensitivity. The sensitivity of the tumor in the stomach wall to peplomycin and mitomycin C was consistent with the clin. efficacy of these drugs against human gastric cancers. Thus, models where the tumors are implanted into the source organ are useful for predicting clin. efficacy in exptl. cancer chemotherapy.

Answer 3:

Bibliographic Information

Fundamental study of 6-day subrenal capsule assay by cyclophosphamide pretreatment. Terashima, Masanori; Ikeda, Kenichiroh; Kawamura, Shuji; Satoh, Masao; Ishida, Kaoru; Amano, Kazuyuki; Takagane, Akinori; Yaegashi, Yasunori; Saitoh, Kazuyoshi. 1st Dep. Surg., Iwate Med. Univ., Japan. *Gan to Kagaku Ryōho* (1988), 15(3), 505-11. CODEN: GTKRDX ISSN: 0385-0684. Journal written in Japanese. CAN 109:16730 AN 1988:416730 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

Immunosuppression with cyclophosphamide prior to the evaluation of the antitumor activity of chemotherapeutic agents against transplanted human esophageal cancer xenograft in the subrenal capsule assay in mice resulted in activities similar to those seen with the drugs in a nude mouse assay system. Increases in toxicity in the cyclophosphamide-pretreated animals was small.

Answer 4:

Bibliographic Information

Experimental studies on heterotransplantation of human squamous cell carcinoma in nude mice and sensitivity test for anticancer agents. Sakamoto, Tomoji. Dent. Coll., Hiroshima Univ., Hiroshima, Japan. Hiroshima Daigaku Shigaku Zasshi (1987), 19(1), 1-13. CODEN: HUDJAN ISSN: 0046-7472. Journal written in Japanese. CAN 107:228638 AN 1987:628638 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

The antitumor effect of the chemotherapeutic agents bleomycin, peplomycin, mitomycin C, cisplatin, 5-fluorouracil, and methotrexate against human squamous cell carcinoma was evaluated in nude mice heterotransplanted with the human carcinoma. Results indicated that the sensitivity test for anticancer agents in nude mice is closely related to their clin. effectiveness. The true pos. and neg. antitumor effects of the drugs tested were 60 and 100%, resp.

Answer 5:

Bibliographic Information

Fundamental and clinical investigations on the reinforcement of the effects of combination cancer chemotherapy by flow cytometric analysis of DNA histograms. New attempts at reinforcement of antitumor effects using FCM. Sato, Yasumitsu. Sch. Med., Akita Univ., Japan. Akita Igaku (1986), 13(4), 561-86. CODEN: AKIGDV ISSN: 0386-6106. Journal written in Japanese. CAN 107:168379 AN 1987:568379 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

The effects of cis-diamminedichloroplatinum (CDDP), peplomycin (PEP), mitomycin C (MMC), adriamycin (ADM), etoposide (VP-16), 5-fluorouracil (5-FU), and vindesine (VDS) upon the viability and cell cycle progression of cultured human esophageal cancer cells (TE-2, AE-2), human esophageal (AEN-2), or gastric (TK) tumor xenografts growing in nude mice were measured and compared using flow cytometry (FCM) in order to improve the methods of selecting the individual agents and establish the most effective regimen for combination cancer chemotherapy. Anal. of the influence of chemotherapeutic agents on cell cycle kinetics using FCM appeared to be very important in the development of an effective cancer chemotherapy. Recruitment and partial synchronization were esp. useful in reinforcing the antitumor effects of combination chemotherapy on solid cancers.

Answer 6:

Bibliographic Information

Studies of heterotransplantation of transplantable human urogenital malignant neoplasms. Part VII. Combined chemo-radiation therapy for the human urinary bladder cancer and the human prostatic cancer transplantable to the nude mice. Hasegawa, Jun. Dep. Urol., Med. Sch., Nippon, Japan. Nippon Hinyokika Gakkai Zasshi (1985), 76(4), 473-82. CODEN: NGKZA6 ISSN: 0369-3988. Journal written in Japanese. CAN 103:67549 AN 1985:467549 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

The effects of combined chemo-radiation therapy were studied using human urinary bladder cancer (NM-B-1) and human prostate cancer (Pro-1) transplanted into nude mice. NM-B-1 is a poorly differentiated transitional cell carcinoma and Pro-1 is a poorly differentiated adenocarcinoma. In both the 24th-27th passage of NM-B-1 and 35th-38th passage of Pro-1, the successful transplantation rates were almost 100% and the growth rates were similar and stable. The therapies were performed by i.p. administration of anticancer drug combined with single-dose irradiation using a linear accelerator. Since the sensitivity of each single agent used in this study was already known for NM-B-1 and Pro-1, the therapeutic modalities in doses were planned by combination of doses less than the minimal ED of each agent. The therapeutic effects were evaluated on the tumor growth curve, as well as light and electron microscopic findings. In the studies using NM-B-1, therapeutic potentiation effects were achieved by radiation combined with cis-diamminedichloroplatinum II (CDDP), bleomycin, or peplomyacin (PEP) on the tumor growth curve. In the studies using Pro-1, therapeutic potentiation effects were achieved by radiation combined with CDDP, PEP, or 5-fluorouracil on the tumor growth curve but not achieved by radiation with mitomycin C (MMC). In all but the groups treated by radiation with MMC or 5-fluorouracil, the characteristic changes were a vacuolic and(or) exudative destruction of cytoplasm with a stromal edemahyalinosis in the light and electron microscopic findings.

Answer 7:

Bibliographic Information

Fundamental studies on combination chemotherapy of cisplatin with peplomycin against human squamous cell carcinomas in nude mice. Ekimoto, Hisao; Aikawa, Minako; Takahashi, Katsutoshi; Matsuda, Akira. Res. Lab., Nippon Kayaku Co., Tokyo, Japan. Gan to Kagaku Ryoho (1985), 12(1), 70-6. CODEN: GTKRDX ISSN: 0385-0684. Journal written in Japanese. CAN 102:142853 AN 1985:142853 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

Combination chemotherapy of 5 human squamous cell carcinomas, xenografted in nude mice, with cisplatin [15663-27-1] and peplomycin [68247-85-8] was more effective when the Pt compd. was given before peplomycin; this effect was esp. marked when cisplatin was administered 5 or 3 days before the other drug. Human tumors transplanted in nude mice should be useful models in combination chemotherapy studies.

Answer 8:

Bibliographic Information

Antitumor efficacy of seventeen anticancer drugs in human breast cancer xenograft (MX-1) transplanted in nude mice. Inoue, Katsuhiko; Fujimoto, Shuichi; Ogawa, Makoto. Div. Clin. Chemother., Cancer Chemother. Cent., Tokyo, Japan. Cancer Chemotherapy and Pharmacology (1983), 10(3), 182-6. CODEN: CCPHDZ ISSN: 0344-5704. Journal written in English. CAN 99:98704 AN 1983:498704 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

The antitumor activity of 17 anticancer drugs was studied in the treatment of a human breast cancer tumor (MX-1) transplanted into nude mice. The antitumor activity of the drugs was evaluated at the LD10 predetd. in mice as a std. therapeutic dose. Drugs were administered i.v., i.p., or orally, and antitumor activity was assessed by drug-induced growth inhibition measured by calipers. Among the 17 anticancer drugs, the most active compds. (max. inhibition of rate of tumor growth: $\geq 90\%$) are mitomycin C, chromomycin A3, vincristine, vinblastine, vindesine, and hexamethylmelamine. Another group of compds. showed moderate activity (max. inhibition rate of tumor growth: 89%-50%), these being adriamycin, daunomycin, mitoxantrone, bleomycin, 5-fluorouracil, 6-thioguanine, and ftorafur. The remaining 4 drugs (peplomycin, cytosine arabinoside, 6-mercaptopurine, and methotrexate) were inactive against the MX-1 tumor. These results suggest that in the nude mouse-human tumor xenograft system there is a good correlation between the antitumor activity of various anticancer drugs and their clin. efficacy; this system is therefore expected to be a useful model for secondary

screening.

Answer 9:

Bibliographic Information

Studies of heterotransplantation of transplantable human urogenital malignant neoplasms. Part V. Chemotherapy against the carcinoma of human urinary bladder transplantable to the nude mice (NM-B-1). Tsuboi, Narumi. Dep. Urol., Nippon Med. Sch., Japan. Nippon Hinyokika Gakkai Zasshi (1982), 73(7), 883-97. CODEN: NGKZA6 ISSN: 0369-3988. Journal written in Japanese. CAN 97:156112 AN 1982:556112 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

ifosfamide [3778-73-2], bleomycin [11056-06-7], pepleomycin [68247-85-8], And cis-diamminedichloride platinum (CDDP) [15663-27-1] were effective inhibitors of human bladder tumor transplanted in nude mice. Combinations of CDDP with pepleomycin, bleomycin, ifosfamide, adriamycin [23214-92-8], and epipodophyllotoxin [4375-07-9] were also effective. CDDP or a combination of CDDP and pepleomycin produced squamous cells, as revealed by histol. examns. Electron microscopic anal. showed an increase of intracellular vacuolation and tonofibrils and the shortening of microvilli in response to CDDP or the CDDP-pepleomycin combination. CDDP and pepleomycin (2.5 and 3 mg/kg, i.p., resp.) appeared to be the most effective against the tumor as compared to the other drugs tested.

Answer 10:

Bibliographic Information

Effects of bleomycin and pepleomycin on the xenografted human uterine carcinomas in nude mice. Hayakawa, Kenichi; Matsui, Yoshiaki; Sawada, Masumi; Nishiura, Haruhiko; Okudaira, Yoshio; Sugawa, Tadashi. Res. Inst. Microb. Dis., Osaka Univ., Osaka, Japan. Gan to Kagaku Ryoho (1980), 7(7), 1228-37. CODEN: GTKRDX ISSN: 0385-0684. Journal written in Japanese. CAN 93:230958 AN 1980:630958 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

Effects of bleomycin [11056-06-7] and pepleomycin [68247-85-8] on human uterine carcinomas xenographted to nude mice (BALB/cnu/nu) were examd. from the aspects of morphol., growth, and DNA synthesis of tumor tissue. Both bleomycin and pepleomycin remarkably suppressed the tumor growth and DNA synthesis in AD-5 and CC-2 tumors. Morphol. changes were obsd. by light and electron microscope. Effects on the lung were also obsd. Pepleomycin produced less lung injury than did bleomycin.

Answer 11:

Bibliographic Information

A biochemical evaluation of oral squamous cell carcinoma growth by measurement of specific activity of succinate dehydrogenase in the subrenal capsule assay. Munakata H; Kayada Y; Kawahara M; Sakamoto T; Yoshiga K; Takada K Department of Oral and Maxillofacial Surgery I, Hiroshima University School of Dentistry, Japan International journal of oral and maxillofacial surgery (1995), 24(3), 216-20. Journal code: 8605826. ISSN:0901-5027. (COMPARATIVE STUDY); Journal; Article; (JOURNAL ARTICLE) written in English. PubMed ID 7594755 AN 96039318 MEDLINE (Copyright (C) 2008 U.S. National Library of Medicine on SciFinder (R))

Abstract

An auxiliary method for determination of chemosensitivity with the subrenal capsule assay (SRCA) was developed in which the specific activity of succinate dehydrogenase (SD) of tumor implanted beneath the renal capsule is measured. The appropriate conditions for measuring the specific activity of SD were determined. The chemosensitivity of tumors, derived from six xenograft lines originating from oral squamous cell carcinomas, to peplomycin (PEP), cisplatin (CDDP), and 5-fluorouracil (5-FU) were evaluated by the SRCA and the nude mouse assay (NMA). The chemosensitivity evaluated by NMA displayed a higher degree of correlation with that determined by the improved SRCA than with that determined by the conventional SRCA. The correlations between overall accuracy of prediction with the NMA and those with the conventional SRCA and the improved SRCA were 72.2% and 88.9%, respectively. These findings suggest that our new assay may be useful for evaluation of chemosensitivity in the SRCA.

Answer 12:

Bibliographic Information

Combined effects of alpha-interferon and anticancer drugs against renal cell carcinoma. Sasagawa T
Department of Urology, Niigata University School of Medicine Hinyokika kyo. Acta urologica Japonica (1990),
36(12), 1397-401. Journal code: 0421145. ISSN:0018-1994. (ENGLISH ABSTRACT); Journal; Article; (JOURNAL
ARTICLE) written in Japanese. PubMed ID 1706135 AN 91165701 MEDLINE (Copyright (C) 2008 U.S. National
Library of Medicine on SciFinder (R))

Abstract

The direct antitumor effects of combined administration of alpha-interferon and chemotherapeutic agents against the human tumor cell line derived from renal cell carcinoma were examined in vivo as xenograft in nude mice. The administration regimen was as follows: Human lymphoblastoid interferon (HLBI) was injected intramuscularly (1 x 10⁵) IU/mouse/day every day for 14 days. Peplomycin (PEP), adriamycin (ADM), or 5-fluorouracil (5-FU) was also administered at a dose of one third of their LD₅₀. We evaluated the effect 20 days after initial administration using the ratio of mean tumor weight. Combined administration of HLBI and PEP or ADM was determined effective and inhibited tumor growth more strongly than HLBI alone or control. Furthermore, the histopathological examination suggested that the effect of combined administration was cytostatic rather than cytolytic.

Answer 13:

Bibliographic Information

Synergistic effects of hyperthermia and peplomycin against human malignant melanoma xenografts. Yamada
K; Nakagawa H; Etoh T; Ishibashi Y The Journal of dermatology (1988), 15(5), 405-11. Journal code: 7600545.
ISSN:0385-2407. Journal; Article; (JOURNAL ARTICLE); (RESEARCH SUPPORT, NON-U.S. GOV'T) written in English.
PubMed ID 2464632 AN 89124076 MEDLINE (Copyright (C) 2008 U.S. National Library of Medicine on SciFinder (R))

Answer 14:

Bibliographic Information

Chemosensitivity test for bladder cancer in a nude-mice experimental system. Yamauchi T; Okada K; Yoshida O;
Kawai T Hinyokika kyo. Acta urologica Japonica (1986), 32(12), 1949-58. Journal code: 0421145. ISSN:0018-1994.
(CASE REPORTS); (ENGLISH ABSTRACT); Journal; Article; (JOURNAL ARTICLE) written in Japanese. PubMed ID
3825832 AN 87152904 MEDLINE (Copyright (C) 2008 U.S. National Library of Medicine on SciFinder (R))

Abstract

The in vivo chemosensitivity test for bladder cancer, using the human bladder cancer xenografts (BT-8 and BT-11 strains) in nude mice (BALB/c) and the BBN-BT-1 bladder cancer strain in BALB/c hetero-mouse which was induced by peroral long-period administration of N-butyl-N-(4-hydroxybutyl) nitrosamine and transplanted into the subcutaneous of mouse, were examined especially in respect to the difference of chemosensitivity between young and old straining and the prospective propriety for clinical application. The subrenal capsule assay (SRC), was also compared with subcutaneous transplantation. Cis-diamminedichloroplatinum (II) and 5-FU were effective for all three strains and adriamycin and cyclophosphamide were effective for the BT-8 and BT-11 strains. Bleomycin, peplomycin and vinca alkaloids were more effective for the BT-11 strain than the BT-8 strain. The chemosensitivity of several anti-cancer drugs for the young BT-8 and BT-11 strains was almost equal to that of the old. A 68-year-old male with bladder cancer metastasized to lung and lymph nodes, whose primary tumor was transplanted to mice and established as the BT-11 strain in 1980, was treated with the VPM-CisCF combination chemotherapy which was evaluated as an effective therapy for this strain experimentally, and responded well to this therapy. As in this case, the results of nude mice experiments are valuable in clinical application. The chemosensitivity test in vivo for individual primary tumors should be done by SRC, and in SRC nude mice should be used instead of conventional mice until immunoreactive rejection can be prevented.

Answer 15:

Bibliographic Information

Non-cross-resistant sequential combination chemotherapy consisting of cis-diammine-dichloroplatinum (II) mainly, based on synchronization theory, in human bladder cancer xenografts in athymic nude mice.

Yamauchi T; Okada K; Yoshida O Hinyokika kyo. Acta urologica Japonica (1986), 32(12), 1781-97. Journal code: 0421145. ISSN:0018-1994. (ENGLISH ABSTRACT); Journal; Article; (JOURNAL ARTICLE) written in Japanese. PubMed ID 2435129 AN 87152887 MEDLINE (Copyright (C) 2008 U.S. National Library of Medicine on SciFinder (R))

Abstract

We examined the chemotherapies with cis-diamminedichloroplatinum (II) (CDDP) alone and in combination, using the human bladder cancer xenografts (BT-8 and BT-11 strains) in athymic nude mice (BALB/C), to establish the most effective and useful method for urothelial cancer in clinical use. First, to assess the anti-tumor activities of single-drug and our devised VPM or CisCF combination chemotherapies, experiments were done using the BT-8 strain bladder cancer (transitional cell carcinoma and grade III). The schedule and dosage of each chemotherapy were as follows. Vincristine (VCR): 0.06 mg/kg, days 1-6, peplomycin (PEP): 0.9 mg/kg, days 1-6, methotrexate (MTX): 0.6 mg/kg, days 1-6, cytosine arabinoside (Ara-C): 3 mg/kg, days 1-6, 5-fluorouracil (5-FU): 30 mg/kg, days 1-6, adriamycin (ADM): 3 mg/kg, days 1-6, cyclophosphamide (CPM): 10 mg/kg, days 1-10, and CDDP: 2.5 mg/kg, days 1-6. These were for single-drug chemotherapies. The VPM combination consisted of VCR (0.06 mg/kg, days 1 and 4), PEP (0.3 mg/kg, days 1-6) and MTX (0.3 mg/kg, days 2, 3, 5 and 6), and the CisCF combination consisted of CDDP (2.5 mg/kg, days 1 and 4), Ara-C (3 mg/kg, days 1 and 4) and 5-FU (15 mg/kg, days 2, 3, 5 and 6). The control group was given normal saline of 0.1 ml/20 g body weight, intraperitoneally. All anti-cancer drugs were also given intraperitoneally. Secondly, to assess the anti-tumor activities of CDDP alone and various modes of combination chemotherapies with or without CDDP, the following experiments were done using the BT-11 strain bladder cancer (a mixed type of transitional cell carcinoma and squamous cell carcinoma). CDDP: 2.5 mg/kg, days 1-6. VPM X 2: VCR (0.04 mg/kg, days 1, 4, 8 and 11), PEP (0.2 mg/kg, days 1-4) and MTX (0.2 mg/kg, days 2, 3, 5, 6, 9, 10, 12 and 13). CisCF X 2: CDDP (2.5 mg/kg, days 1 and 8), Ara-C (3 mg/kg, days 1, 6, 8 and 13) and 5-FU (30 mg/kg, days 3, 4, 5, 10, 11 and 12).

VPM-CisCF (I): VCR (0.04 mg/kg, days 1 and 4), PEP (0.2 mg/kg, days 1-7), MTX (0.2 mg/kg, days 2, 3, 5 and 6), CDDP (2.5 mg/kg, day 8), Ara-C (3 mg/kg, days 8 and 13), and 5-FU (30 mg/kg, days 10-12).(ABSTRACT TRUNCATED AT 400 WORDS)

Answer 16:

Bibliographic Information

Sequential combination chemotherapy consisting of vincristine, peplomycin, methotrexate,

cis-diamminedichloroplatinum (II), cytosine arabinoside and 5-fluorouracil, for advanced urothelial cancer.

Yamauchi T; Hida S; Ooishi K; Okada K; Yoshida O Hinyokika kyo. Acta urologica Japonica (1985), 31(7), 1093-104. Journal code: 0421145. ISSN:0018-1994. (CASE REPORTS); (ENGLISH ABSTRACT); Journal; Article; (JOURNAL ARTICLE) written in Japanese. PubMed ID 2414981 AN 86047350 MEDLINE (Copyright (C) 2008 U.S. National Library of Medicine on SciFinder (R))

Abstract

Two VPM-CisCF chemotherapy regimens (vincristine (VCR), peplomycin (PEP), methotrexate (MTX), cis-diamminedichloroplatinum (II) (CDDP), cytosine arabinoside (Ara-C) and 5-fluorouracil (5-FU), established using human bladder cancer xenografts in nude mice were applied for advanced urothelial cancer. VPM-CisCF (I) consisted of 0.4 mg/m² VCR on days 1 and 4, 2 mg/m² PEP on days 1-7, 2 mg/m² MTX on days 2, 3, 5 and 6, 20 mg/m² CDDP on days 8, 20 mg/m² Ara-C on days 8 and 13, and 150 mg/m² 5-FU on days 10-12. VPM-CisCF (II) consisted of 0.6 mg/m² VCR on days 1 and 3, 3 mg/m² PEP on days 1-4, 3 mg/m² MTX on days 2 and 3, 35 mg/m² CDDP on day 4, 20 mg/m² Ara-C on days 4 and 7, and 200 mg/m² 5-FU on days 5 and 6. These doses were adjusted for each case: the above mentioned dose $\times [(80/(40 + \text{Age}))^2 + (\text{Karnofsky's performance status}/100)^2]$. VPM-CisCF (I) was administered to 6 patients (bladder cancer and transitional cell carcinoma), intra-arterially in two cases. One patient showed a complete response and survived for 7 months, three partial response (PR) surviving for 13, 8 and 37 (arterial-infused case) months, one showed minor response (MR) surviving for 4 months, and one had no change (NC) surviving for 5 months. VPM-CisCF (II) was administered to 11 patients (1 ureteral cancer, 1 renal pelvic cancer, 9 bladder cancer, and 10 transitional cell carcinoma except a case of mixed type of transitional cell carcinoma and squamous cell carcinoma). Four of the patients who had PR survived for 9, 8, 8 and 7 (alive) months, two who had MR survived for 8 and 4 months, three who had NC survived for 6, 4 and 4 months, and who two had progressive disease survived for 8 and 6 months. The major toxicities were myelosuppression and gastrointestinal symptoms, especially nausea and vomiting, but the treatment was well-tolerated.