

# 日本語要約

- 10コース以上同一の化学療法レジメンが施行できた遠隔転移を有する症例を検討
- 全例で温熱化学療法を施行された
- 薬剤別では、タキサン、ゲムシタビン、イリノテカンの率が高かった
- 同時期に施行された全治療症例の中で、18%が10コース以上施行できていた
- 癌種別では、肺癌、乳癌、婦人科癌、頭頸部癌の比率が高かった
- これらの例の全体の間接生存期間は60ヶ月、5年生存率は48%と非常に良好
- 温熱療法による抗癌剤の薬剤増感、耐性出現予防による結果であろうと推測された

# The investigation of cases with long term chemo-hyperthermia of same regimen

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# Backgrounds

- The drug-resistant conquest is an important problem in the cancer treatment.
- We investigated the cases with long-term efficacy by the chemo- hyperthermia (HT) of same regimen.

# Methods

- 66 patients with malignant tumors treated with chemo-HT using the same regimen more than 10 courses were investigated.
- Total number of same primary cases treated with chemo-HT during the same period was 377.
- The patients were 37 males and 29 females, mean age were 64.7.
- Primary diseases were 16 cases with lung cancer, 13 cases with colorectal cancer, 8 patients with gastric cancer and other several tumors.
- Schedule of chemo-HT was weekly, biweekly or triweekly.
- In every month, evaluation of disease was done.

# Patients characteristics

- Age: Average  $64.7 \pm 11.5$
- Gender: Male: 37 Female: 29
- Primary focus

lung cancer	16
colorectal ca.	13
gastric ca.	8
breast ca.	6
pancreas ca.	4
esophageal ca.	4
head and neck ca.	4
bile duct ca.	3
ovarian ca.	3
uteri cervical ca.	2
malignant fibrous histiocytosis	2
Unknown origin	1

Table 1: Type of regimen used in chemo-HT more than 10 courses

Regimen	No. of cases	Rate
PAC±other	18/66	27%
GEM±other	9/66	14%
CPT-11±other	9/66	14%
DOC±other	7/66	11%
5-FU/LV±other	6/66	9%
CDGP±other	4/66	6%
other	13/66	20%

Table 2: The ratio of long term same regimen case by comparison with same primary cases during the same period

Primary site	object	all	%
lung cancer	16	69	23%
colorectal ca.	13	101	13%
gastric ca.	8	56	14%
pancreas and bile duct ca.	7	57	12%
breast ca.	6	21	29%
esophageal ca.	4	27	15%
head and neck ca.	4	19	21%
ovarian ca. and uteri cervical ca.	5	22	23%
malignant fibrous histiocytosis	2	2	100%
Unknown origin	1	3	33%
all	66	377	18%

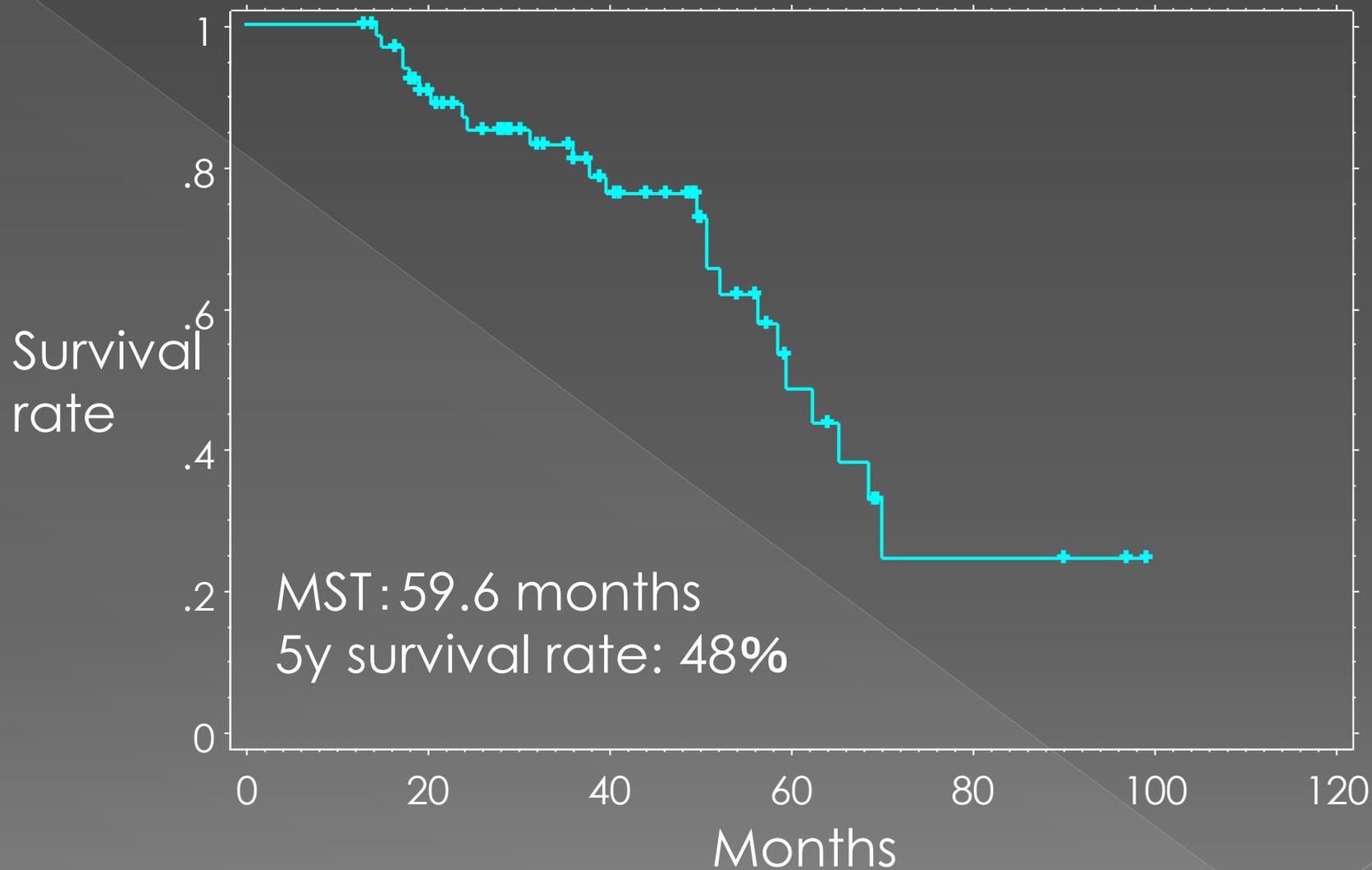


Fig. 1: Overall survival curve of cases with chemo-HT more than 10 courses

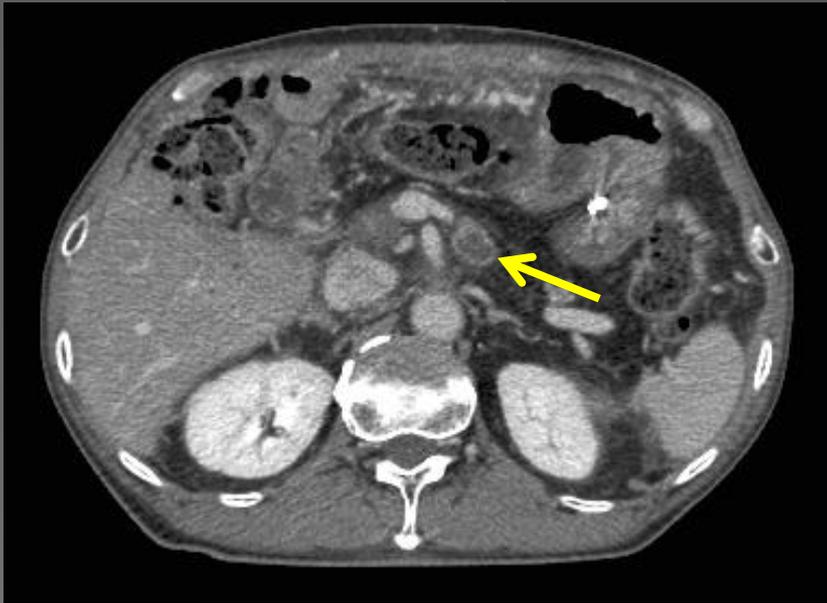
# Results

- The median course of same regimen with stable disease was  $18.6 \pm 9.0$  in 66 cases (10- 53 courses).
- Relatively high ratio of long term same regimen case was recognized in the regimen based with PAC, GEM or CPT-11 as shown in Table 1.
- Table 2 showed the ratio of long term same regimen case by comparison with same primary cases during the same period. More than 20% ratio of long term same regimen case was recognized in lung, breast, head and neck and gynecological cancer. 18% of patients could be used the same regimen more than a year in our hospital.
- Median survival time was 59.6 months and 5 years survival rate was 48% as shown in Fig. 1.
- A case of 60's male with bile duct ca. treated with chemotherapy more than 44 months is shown.

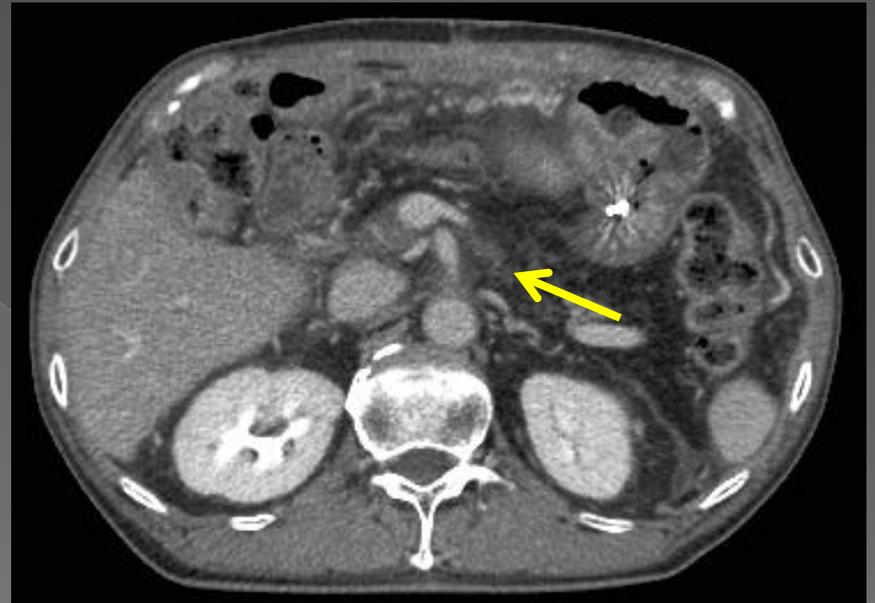
# Case: 60's male recurrent bile duct cancer

- 2007/6: Diagnosis of post-operative bile duct cancer recurrence  
Chemo-hyperthermia (GEM, GEM/S-1)
- 2008/11: Local failure
- 2008/12: Chemo-hyperthermia (CPT-11)
- 2012/8: Maintenance chemo-hyperthermia (CPT-11) during 44 months with stable disease

# Evaluated for CT

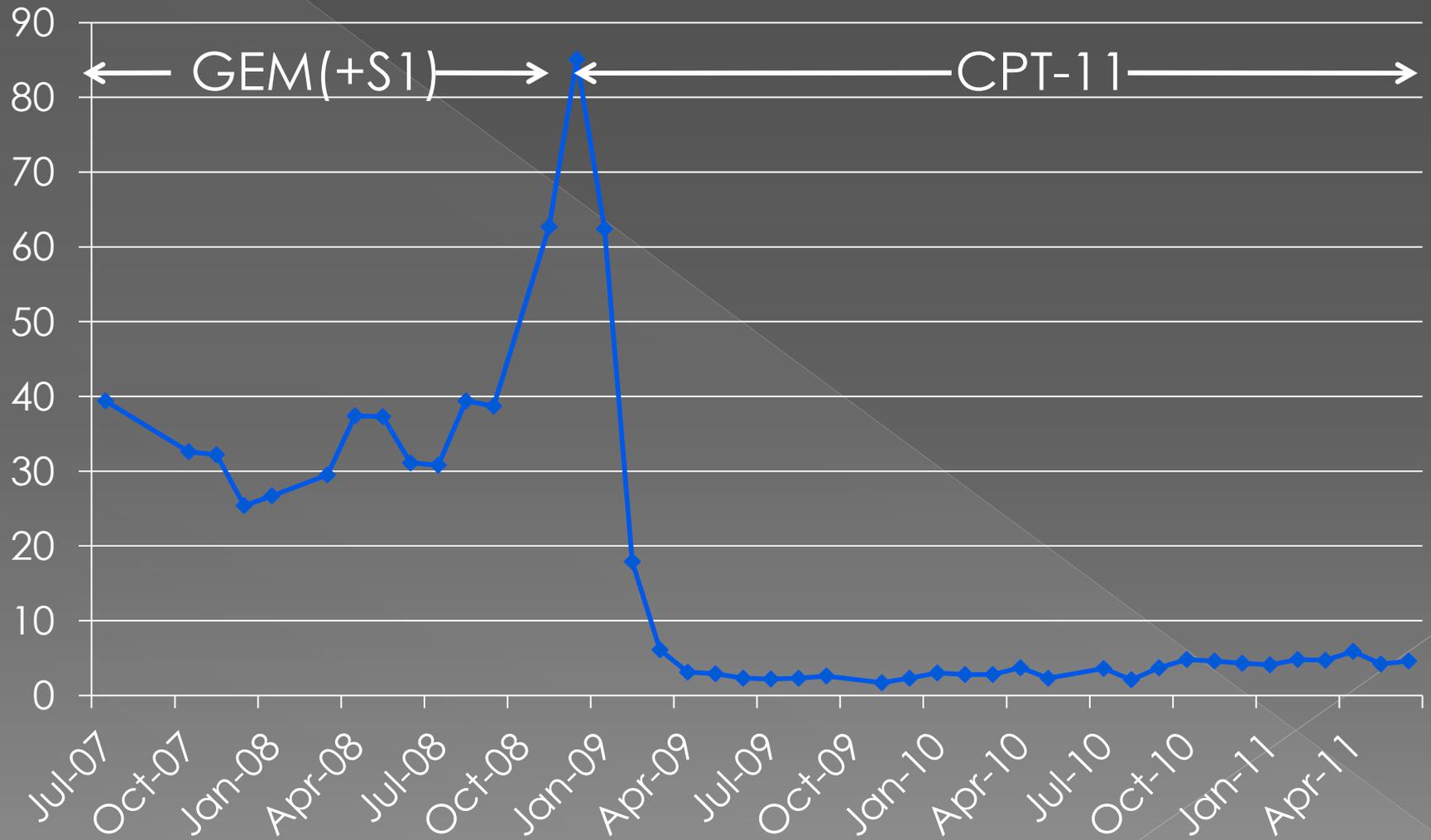


Pre treatment



Post treatment

# The trend of CEA



# Discussion

- The reason shown in the results was considered the drug sensitization and prevention of drug resistance by HT.
- Various mechanisms may account for the drug sensitization by HT, e.g. increased drug uptake into cells, increased DNA damage, decreased DNA repair, reduced oxygen radical detoxification and increased membrane damage.
- In addition, experimental reports showed the prevention of drug resistance in many anti-cancer drugs by HT, although the mechanisms were not well defined.

# Conclusion

- HT may extend chemotherapeutic response periods in various cancer.
- Long-term efficacy by the chemo- HT of same regimen may lead to long term survival in cancer treatment.