

# Anesthesiology and Intensive Care Unit

## Introduction

Perioperative care for cancer patients with limited vital organ function is a major challenge for anesthesiologists as, in general, anesthesia and surgery may further deteriorate physiological functions. Perioperative impairment of vital organ function has traditionally been defined as surgical stress determined quantitatively by measuring the physiological parameters representing the corresponding organs. Recent evidence suggests that such a stress response to surgery involves not only vital organs but also the neuro-endocrine-immune system and persists for several days after surgery. Thus, the aim of our anesthetic management is to protect patients from surgical stress by blocking the noxious influences of surgical trauma. This is achieved by regarding the anesthetic management as perioperative care.

## Routine Activities

As stated above, our colleagues ( two staff anesthesiologists and three residents ) are working as anesthetists and intensive care physicians.

In 2004, we performed 2265 anesthetic procedures. The annual number of patients admitted to the intensive care unit (ICU) amounted to 1033. Our concern in ICU management is not only post-operative cardiorespiratory care but also the critical care of patients who have developed organ failure after medical or surgical cancer treatment. The cumulative number of patients with organ failure

treated in the ICU since the establishment of the National Cancer Center Hospital East is 377.

An outpatient of clinic our group was introduced in 1997 to improve preoperative evaluation of anesthetic risk in surgical patients and to participate in the management of intractable pain. This system will further improve patient safety and the quality of pain control.

Daily activity starts with ICU rounds and pre-anesthesia case presentation. ICU rounds are also made every evening after the completion of elective surgical procedures.

A journal club is held twice a week to maintain up-to-date knowledge of recent advances in anesthesia and critical care medicine.

### New Developments in 2004

- Ongoing clinical studies ;
- 1) Establishment of perioperative management for abdominal surgery patients with severely limited pulmonary function.
  - 2) Establishment of airway and respiratory management for patients with upper airway obstruction.
  - 3) Development of perioperative management for free-tissue transfer surgery patients with head and neck tumor

Future research activities will be directed toward the establishment of new methods of perioperative care in the field of surgical oncology.

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Number of Patients Managed Under General or Spinal/Epidural Anesthesia

Year	Total no.	Emergency cases
1995	1524	83 (5.4%)
1996	1594	62 (3.9%)
1997	1624	51 (3.1%)
1998	1642	45 (2.6%)
1999	1563	49 (3.1%)
2000	1742	62 (3.6%)
2001	1972	68 (3.4%)
2002	2041	82 (4.0%)
2003	2159	114 (5.3%)
2004	2265	101 (4.5 %)

Number of Patients Admitted to ICU

Year	No. of Cases	(Casespermonth)
1995	671	(55.9)
1996	704	(58.7)
1997	755	(62.9)
1998	887	(73.9)
1999	959	(79.9)
2000	1027	(85.6)
2001	1127	(93.9)
2002	1042	(86.8)
2003	1065	(88.8)
2004	1033	(86.1)

Prognosis of Organ Failure Treated in ICU

(1992.7. – 2004.12.)

Primary malignancy	No. of pts	Discharge*	Death*
<b>Postoperative Patients</b>			
Stomach	37	24	13
Pancreas & Biliary tract	46	15	30
Colorectal	33	20	13
Esophagus	29	13	16
Head & Neck	37	27	9
Liver	17	8	9
Panperitonitis	7	2	5
Lung	34	13	21
Others	10	6	4

### Post-chemo-radiotherapy

Head & Neck	20	5	15
GI tract	26	6	19
Lung	29	11	18
Others	52	20	31

\*Discharge is defined as discharge from the hospital. Death includes patients who recovered from organ failure but subsequently died from the primary disease during hospitalization.

Prognosis in Relation to the Number of Failed Organs

No. of failed organs	No. of pts	Discharge	Death
1	176	115	59
2	118	43	73
≥3	83	12	71