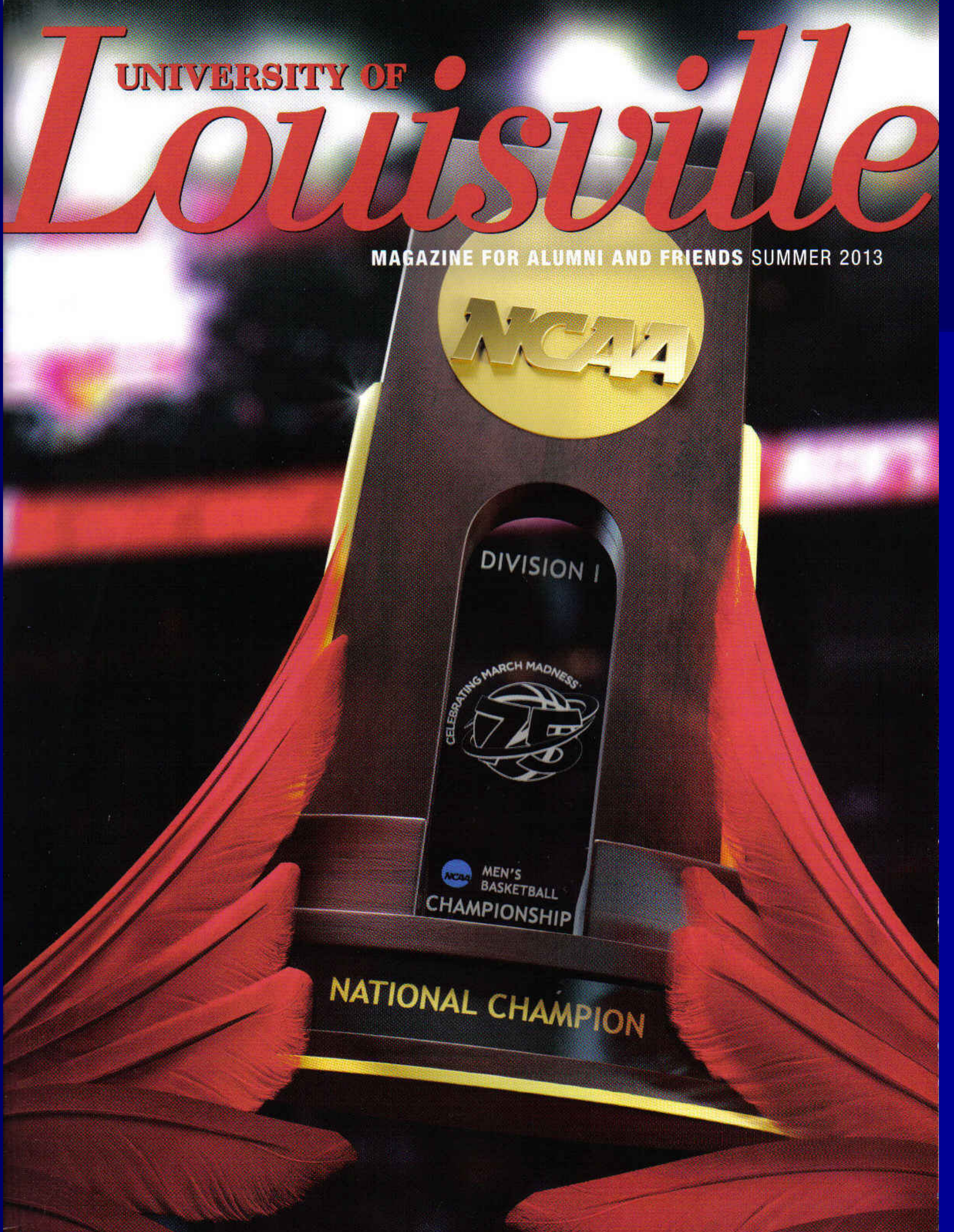
Greetings From Kentucky

Welcome to Louisville, Kentucky

The Louisville Cardinals

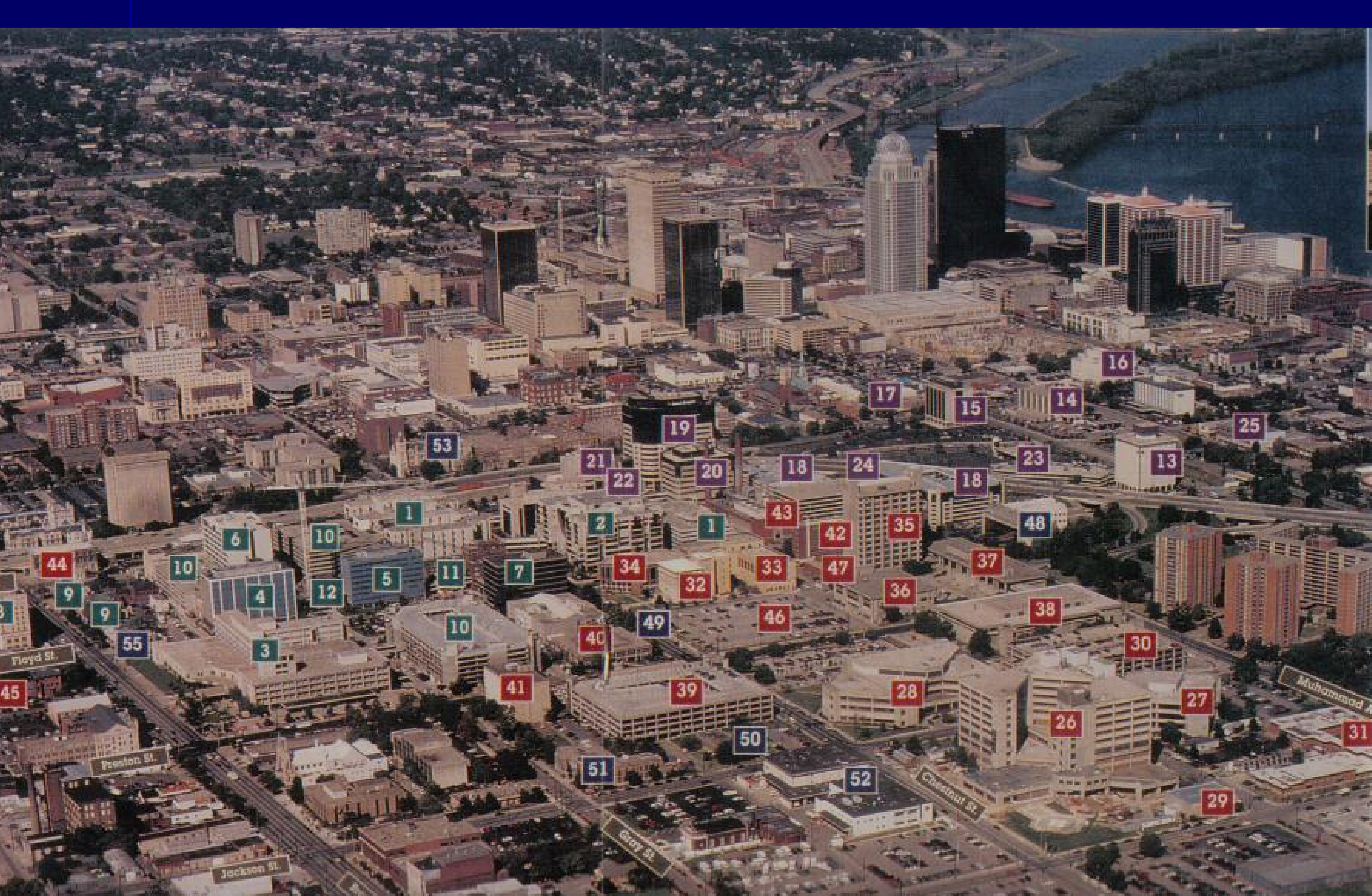

UNIVERSITY OF
Louisville
MAGAZINE FOR ALUMNI AND FRIENDS SUMMER 2013
NCAA
DIVISION I
CELEBRATING MARCH MADNESS
MEN'S
BASKETBALL
CHAMPIONSHIP
NATIONAL CHAMPION

Greatest Athletes From Louisville

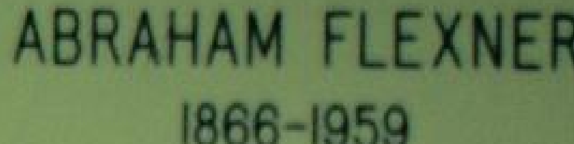
http://www.quirkcollective.com/whatelseison2.htm

http://www.robbiesfirstbase.com/sports_memorabilia/baltimore_orioles_baseball_ravens_football_memorabilia.html

The Louisville Medical Center



Father of Medical Education



ABRAHAM FLEXNER

1866-1959

ABRAHAM FLEXNER WAS BORN IN LOUISVILLE, KENTUCKY TO GERMAN JEWISH IMMIGRANT PARENTS.

AFTER GRADUATING IN ARTS FROM JOHNS HOPKINS, HE RETURNED TO LOUISVILLE AS A SCHOOLMASTER AND RAPIDLY ACQUIRED A NATIONAL REPUTATION AS A SUCCESSFUL LIBERAL EDUCATOR OF ENERGY AND ORIGINALITY.

HIS SUBSEQUENT APPOINTMENT BY THE CARNEGIE FOUNDATION TO INVESTIGATE MEDICAL EDUCATION IN THE UNITED STATES AND CANADA LED TO THE PUBLICATION, IN 1910, OF THE "FLEXNER REPORT". ITS EFFECT ON MEDICAL EDUCATION WAS IMMEDIATE. THE MANY SERIOUS DEFICIENCIES FLEXNER UNCOVERED CAUSED A NUMBER OF MEDICAL SCHOOLS TO CLOSE THEIR DOORS FOREVER; OTHERS WERE RADICALLY REORGANIZED AND UPGRADED ALONG LINES HE HAD SUGGESTED.

THE REPORT EMPHASIZED THE NEED FOR HIGHER STANDARDS FOR STUDENT ADMISSIONS AND FOR INCREASED CLINICAL FACILITIES AT UNIVERSITY HOSPITALS STAFFED BY A FULL-TIME FACULTY DEDICATED TO TEACHING AND RESEARCH.

THE FLEXNER REPORT STANDS AS A MONUMENT IN PROGRESS OF AMERICAN MEDICAL EDUCATION.

DR. FLEXNER IS REPRESENTED IN THE CENTER OF THIS MOSAIC.

First Hand Transplant in USA

Hand is transplanted by Louisville surgeons

PHOTOS BY ARZA BARNETT, THE COURIER-JOURNAL

Matthew Scott gestured with his prosthetic left hand earlier this month. He received a donor hand at Jewish Hospital during an operation that ended early yesterday. "This is a chance for me . . . to get something back that is alive," he said.

Patient doing well after first U.S. operation

By DICK KAUKAS
The Courier-Journal

After a 15-hour surgical marathon that ended at 5 a.m. yesterday, a team of Louisville surgeons announced that they had performed the first hand transplant in the United States.

They took the left hand from a brain-dead donor whose heart was still beating and attached it to the arm of Matthew Scott, 37, a father of two from Absecon, N.J., whose own left hand was blown away by a firecracker.

Dr. Warren Breidenbach, the hand surgeon who led the team, said Scott was doing extremely well yesterday afternoon, but that it was still too early to know if he would gain significant use of the hand.

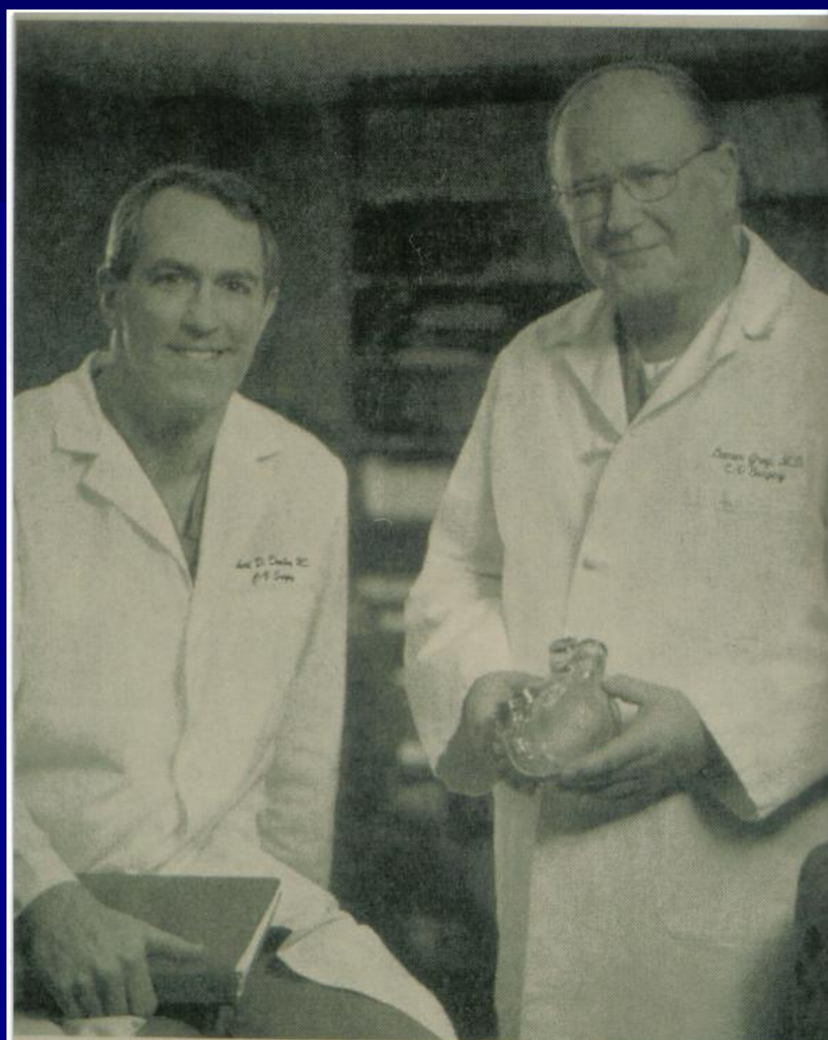
If the operation is successful, Scott may some day be able to pick up a golf ball with the transplanted hand, but he probably won't be able to pick up a penny off the ground or a needle off a table.

Scott was still sedated and groggy early last night, but friends and others who saw him said he smiled, waved with his right hand and looked at his new pink fingers, which were visible above his bandages.

The donor wasn't identified,

First Artificial Heart in the World

http://dsc.discovery.com/news/2006/09/06/artificialheart_hea_zoom0.html?category=health&guid=20060906160030



Doctors Laman Gray, right, and Rob Dowling performed the first artificial heart mplant July 2, 2001. (Photo from U of /Jewish Hospital collection.)

Pain Management – Near End of Life

Benjamin M. Rigor, M.D., LL.D.

Emeritus Professor & Chairman

Department of Anesthesiology & Perioperative Medicine

School of Medicine

University of Louisville Health Sciences Center

Louisville, Kentucky, U.S.A. 40202

E-mail: *bmrigo01@louisville.edu* *or*

bmrigorsrmd@juno.com

Disclaimers/Disclosures

- I am in the Speaker's Bureau of the University of Louisville for continuing education of physicians, health professionals & for public information.
- Some of my phase II-III clinical trials were supported by grants from drug companies on competitive/merit basis & I don't have any financial interests or investments in them.
- The opinions expressed during this presentation are my own & do not necessarily reflect those of the University of Louisville or organized medicine (A.M.A.).

Case Presentation

- 71 yrs. old, w, m, with transitional cell Ca of the bladder, diagnosed 4 yrs. ago, treated with sparing bladder resection, rt. nephrectomy & radiation therapy. CT & MRI showed retroperitoneal mass, adenopathy & biopsy was consistent with tumor recurrence. Chemotherapy was complicated by nausea, hair loss, fatigue & cytopenia. Repeat CT showed mass with L4 involvement. VAS was 8/10, rt. hip, shock-like pain, numbness, altered temperature sensation, worse on walking, disabling but well preserved bladder/bowel functions.

Case Presentation

- Pain therapy included dilaudid, 2-4 mg p.o., q 4-6 hrs.; oxycontin, 20 mg p.o., q 8 hrs.; hydrocodone/APAP, 1 tab. q 4-8 hrs.; and, duragesic, 100 mcg patch, q 72 hrs.
- Oncologist predicted 3-4 mos. life expectancy after the patient developed convulsions, stupor, coma with alternate full consciousness consistent with cerebral metastasis.
- Son & daughter had conflicting desires. The daughter wants palliative care, comfort only & DNR orders. The son insists that aggressive treatment be offered including full CPR, IV fluids, tube/hyperalimentation feedings & respiratory care.

Ethical Dilemmas in Pain Management

- End-of-life care/scenarios.
- Acts of omissions & commission.
- The "narcotic seeking" patient!
- Pain & horror of human experimentation.
- The cognitively impaired patients.
- Paternalism by the health care providers.
- Palliative care/hospice environment.
- Use of non-conventional or not proven modalities/therapies.
- Substantive justice & limited resources!!

Domains

- Adequate pain & symptoms controls.
- Avoidance of inappropriate prolongation of life.
- Consider resources & financial limitations.
- Respect patient/surrogate/proxy autonomy & decisions.
- Optimal family & relative involvement (also cultural, community & societal aspects).
- Emotional, psychological, & existential spiritual/pastoral support.
- Effective, efficient, adequate communications.
- Bioethical & medical-legal considerations.
- Preparation for eventuality & bereavement.

Principles of Therapy

- Start with non-invasive & simple therapy.
- Use the WHO 3-step analgesic ladder.
- Monitor efficacy, compliance & toxicity.
- Use drugs with shorter half-lives.
- Consider additive effects of other types/classes/adjuvant drugs.
- Maximize drug dosages & allow enough time for drug action.
- Consider ancillary/non-drug modalities.
- Use consultants/experts when needed.

Principles of Therapy

- Stabilize & treat all medical conditions.
- Differentiate chronic, new, acute & breakthrough pain.
- Use fewer drugs & avoid poly-pharmacy.
- Start with the lowest effective dose (LED).
- Individualize & simplify regimen.
- Provide perceptual & sensory aids/aides.
- Prepare patient & family for eventualities.
- Consider resources & cost-effective care.

Quality of Life

- Intolerable symptoms & side effects of treatments.
- Functional capacity to perform ADL's, i.e., grooming, walking, meals, shopping. Etc.
- Experiences of happiness, pleasure, pain & suffering.
- Patient's independence, privacy & dignity.

What is Futility?

- Intervention(s) has/have no pathophysiologic rationale.
- Active known treatment(s) had already failed.
- Likelihood of success is very small (<1%).
- No worthwhile goal of care can be achieved.
- Quality of life is unacceptable!!
- Prospective benefit is not worth the resources or expenditure required.

Competence

- Patient makes/communicates a choice.
- The patient appreciates the following:
  - Medical situation & prognosis.
  - Nature of the recommended care.
  - Alternative course(s) of care/therapy.
  - Risks, benefits & consequences of each alternative.
- Decision is consistent with patient's values & goals.
- Decision did not result from delusions, or harassment or false reward system.
- Patient uses reasoning/logic to make a choice.

Most Common Symptoms – End of Life

- Fatigue
- Pain
- Dyspnea
- Delirium
- Anorexia
- Depression
- Sleep disturbances

What Bothers You Most?

- 16% - Emotional, spiritual, existential or nonspecific distress.
- 15% - Relationships.
- 15% - Concerns about the dying process & death.
- 12% - Loss of function & normalcy.

Worries, Reluctance, Attitudes, Beliefs, etc.

- Fear of addiction to opioids.
- If pain is treated early, no options for future pain.
- Desire to be a "good" patient.
- Increase of pain means progression of the disease.
- Dealing with patients with history of drug abuse/misuse.
- Concerns about the cost of medicines, invasive procedures, laboratories, diagnostics, etc.
- Many physicians/health professionals are <u>unfamiliar</u> with the pharmacology of narcotic analgesics & adjuvant drugs (10- 15%).

Interventions – Imminent Death

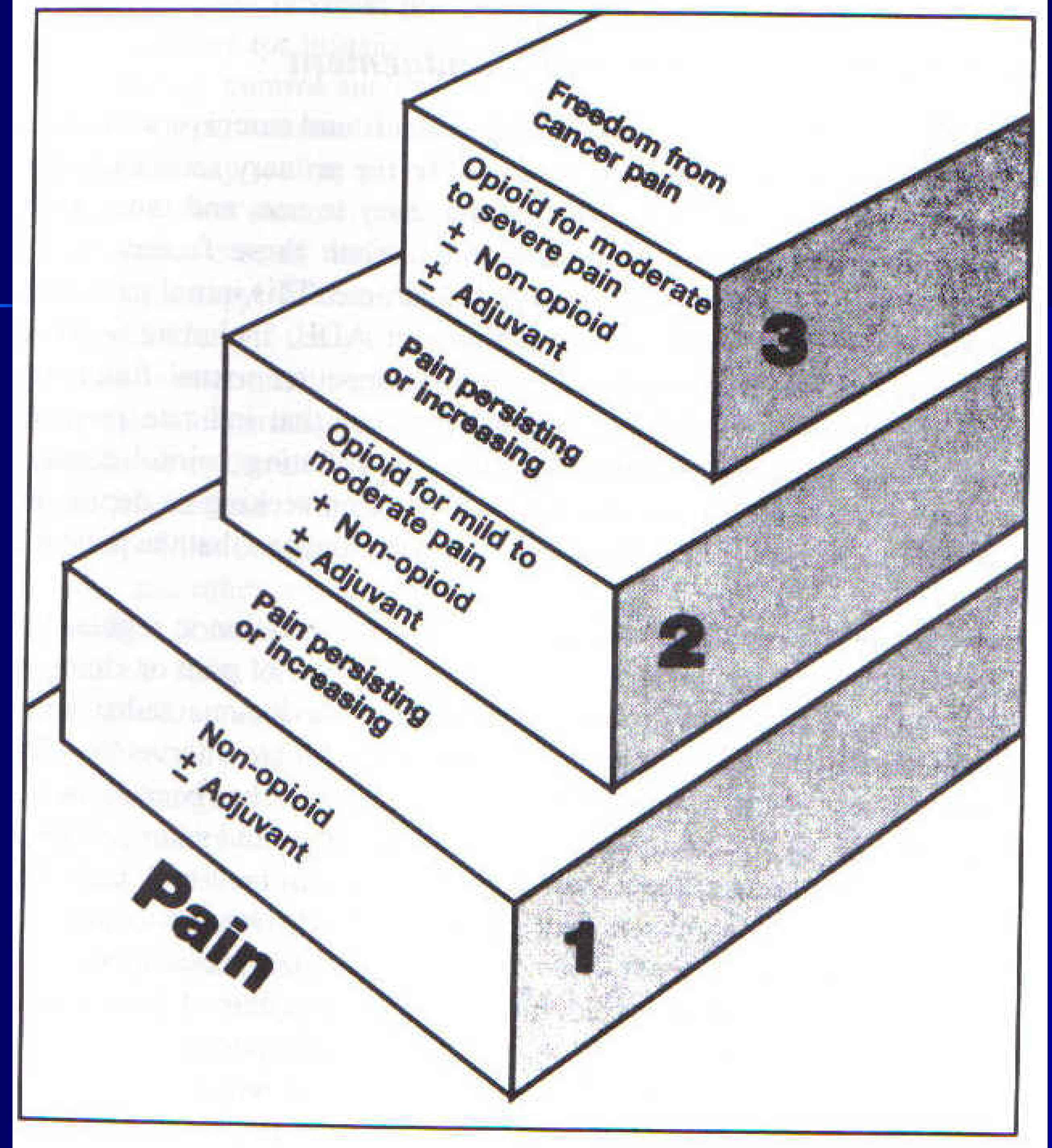
- Intensify on-going care.
- Ensure privacy.
- D/C all diagnostic tests.
- Reposition for comfort as appropriate.
- Avoid unnecessary needle sticks.
- Provide oral care.
- Treat urinary retention/fecal impaction.
- Ensure other accesses when oral route is not functional.
- Prepare to meet request for organ donation & autopsy.

Interventions – Imminent Death

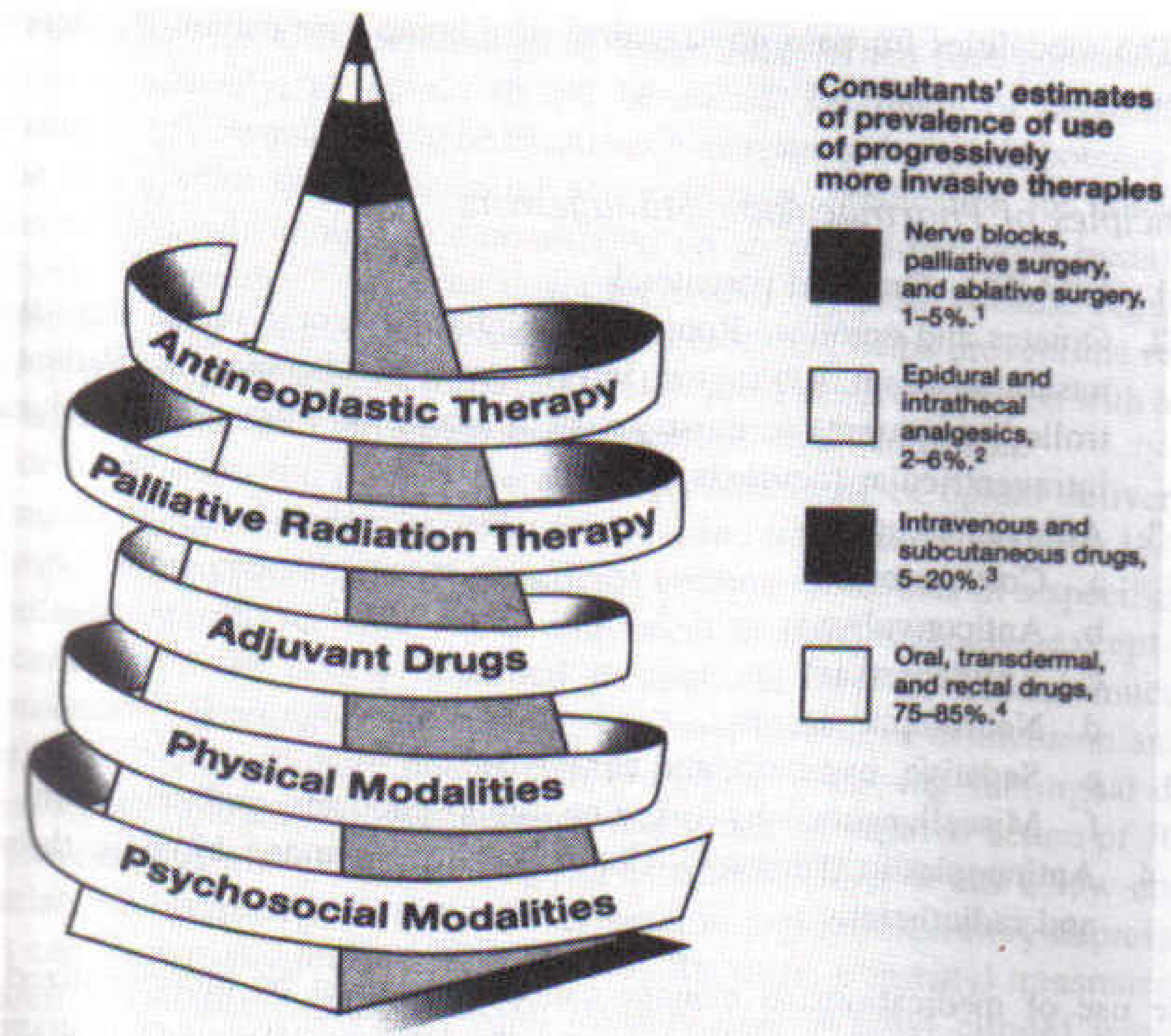
- Allow patient/family uninterrupted time together.
- Explain signs/symptoms of imminent death & support of the dying process.
- Offer anticipatory bereavement support.
- Provide support of relatives/children & encourage visits consistent with family values.
- Support culturally meaningful rituals.
- Facilitate round-the-clock family presence & quiet & conducive environment.
- Understand/honor advance directives & finally, facilitate closure.

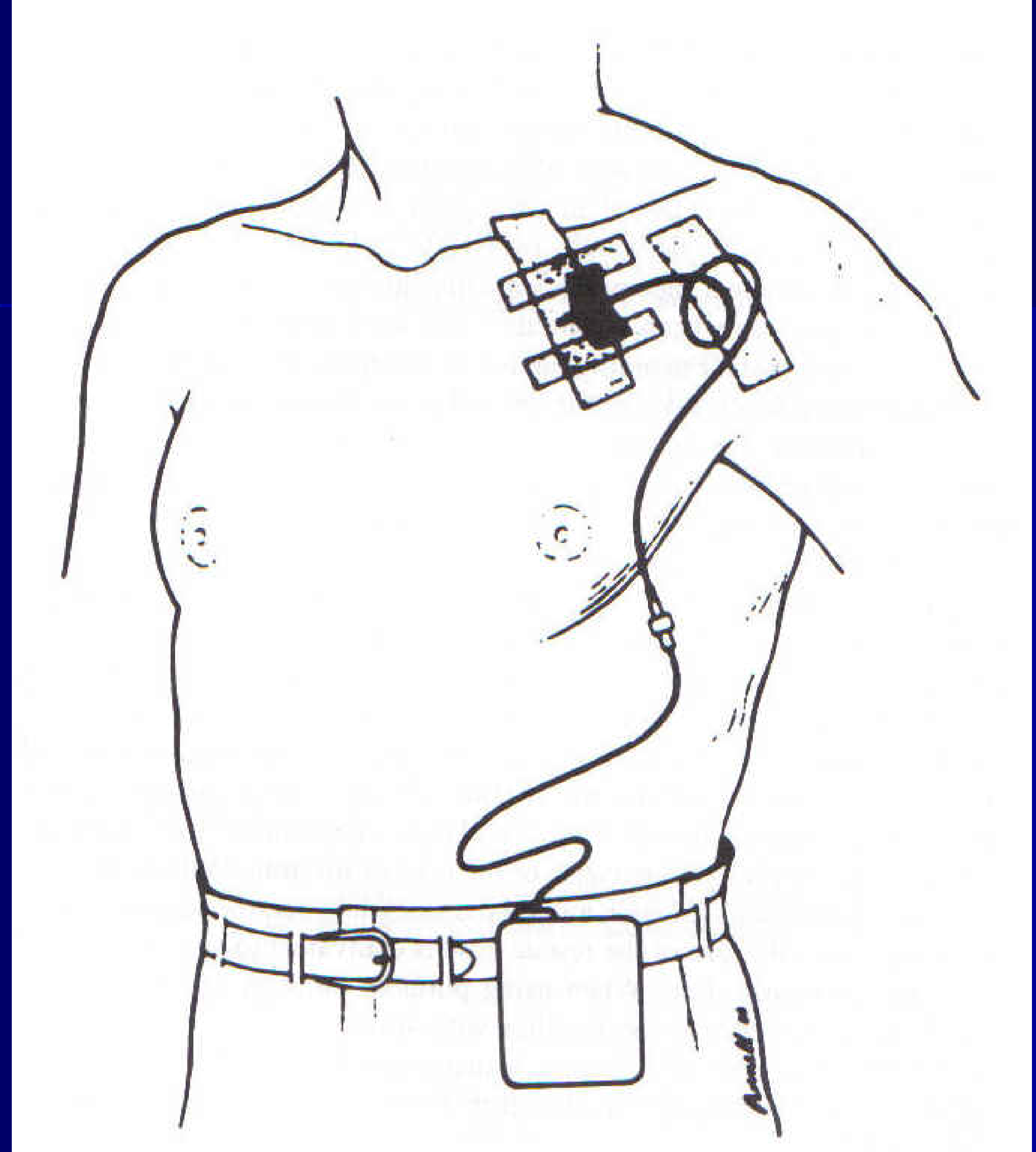
Opioid Equivalent Doses

Drug	Oral Dose	Parenteral Dose
Morphine	30 mg.	10 mg.
Codeine	200 mg.	NA
Hydromorphone	7.5 mg.	1.5 mg.
Hydrocodone	30-45 mg.	NA
Oxycodone	20 mg.	NA
Oxymorphone	10 mg.	1.0 mg.
Methadone	20 mg.	10 mg.
Buprenorphine (transdermal patch)	5 mcg/hr.	NA



Freedom from cancer pain
Opioid for moderate to severe pain
± Non-opioid
± Adjuvant
3
Pain persisting or increasing
Opioid for mild to moderate pain
± Non-opioid
± Adjuvant
2
Pain persisting or increasing
Non-opioid
± Adjuvant
1
Pain


Consultants' estimates of prevalence of use of progressively more invasive therapies
Nerve blocks, palliative surgery, and ablative surgery, 1–5%.1
Epidural and intrathecal analgesics, 2–6%.2
Intravenous and subcutaneous drugs, 5–20%.3
Oral, transdermal, and rectal drugs, 75–85%.4
Antineoplastic Therapy
Palliative Radiation Therapy
Adjuvant Drugs
Physical Modalities
Psychosocial Modalities



Opioid Doses = Fentanyl Transdermal Patch

Fentanyl (transdermal)	Morphine	Hydrocodone	Oxycodone	Codeine
25 mcg/hr	60 mg.	7.5 mg.	30 mg.	200 mg.
50	120	15.0	60	400
75	180	22.5	90	600
100	240	30.0	120	800

Strategies – Prevention of Opioid Resistance/Escalation

- Use the WHO 3-step analgesic ladder.
- Utilize opioid rotation.
- Start with the lowest effective dose (LED).
- Consider additive effects of adjuvant drugs.
- Explore other routes of administration.
- Supplement with non-pharmacological & alternative modalities/therapies.
- In cancer pain, use antineoplastic therapies – chemo/radiotherapy, hormones, etc.
- For resistant pain, use anesthetic, neuroaxial infusion (Ommaya), neurosurgery, etc.

Classes of Adjuvant Drugs

- Corticosteroids.
- Anticonvulsants.
- Antidepressants.
- Major/minor tranquillizers.
- Neuroleptic agents.
- Sedatives, hypnotics & anxiolytics.
- Miscellaneous – anti-emetics, pro-kinetics, calcitonin, biphosphonates, hormones, etc.

Non-Pharmacologic & Alternative Therapies

- Physical modalities – Cutaneous stimulation – Thermotherapy, cryotherapy, massage, pressure, vibration.
  Exercise.
  Counterstimulation – TENS, acupuncture, etc.
  Chiropractic Manipulation (?).
- Psychological interventions -
  Relaxation & Imagery
  Distraction & Reframing.
- Patient Education.
- Hypnosis & Psychotherapy.
- Pastoral Counseling.
- Improvement of coping skills.
- Pastoral therapy – Transcendental meditation.
- Narcotic anonymous (NA).
- Touch therapy.
- Music Therapy.
- Art Therapy.

Bioethical Principles

- Beneficence & respect for autonomy.
- Patient's rights are justifiably limited when health resources are scarce!
- Different patients have different levels or intensity of needs/care.
- Patients have ethical obligation to be prudent savers for their own health care cost.
- Health care needs of the young maybe favored over older people who had achieved natural life span!

Bioethical Principles

- **Patients & health care professionals have ethical obligations <u>not to impose</u> of family members & other caregivers <u>unreasonable long</u> <u>term care burdens</u>.**
- **Courts are not optimally suited to make medical decisions. They are the <u>tribunal of last resort</u>.**
- **A reformed health care system need to <u>universal</u> (global) & not fragmented & exclusionary.**
- **Universal access to basic & decent minimum of health care resources.**

The Patient's Bill of Rights

- Considerate, adequate & respectful care.
- Complete medical information, charts, records, costs of care, etc.
- All information to give informed consent.
- Right to refuse treatment to the extent permitted by law & know all the consequences.

The Patient's Bill of Rights

- Privacy & autonomy concerning all stages of medical care.
- Confidentiality of all records & communications.
- Reasonable response for services & procedures.
- Knowledge of relationships with other health care & educational entities.
- Know human experimentation & right to refuse participation.

Preparation for Bereavement

- Last will & testament.
- Durable power of attorney.
- Advanced directives, desires & instructions.
- Appointment of legal medical/family surrogate or proxy.
- Burial plans, dispositions, expenses & wishes.
- Know quality of life & what is futile!!
- Goal of care – Dying with dignity/respect!

End-of-Life care

"Never deprive someone of hope, it might be all they have."

"The grand essentials in this life are something to do, something to love, and something to hope for."

Joseph Addison