Global cooperation in gynecologic cancer

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Shopping for a new car

Shopping for a new golf cart

Shopping for new clothes

The first Pacific US President

More deferential

More collaborative

More communicative

Best of East and West

OBAMAO

Congratulations to the Asian Society of Gynecologic Oncology

President Soon-Beom Kang,
ASGO Officers, Council, and members

Seven Sister Societies: I

- European Society of Gynecologic Oncology
  - Prof. Ate van der Zee, President
- International Gynecologic Cancer Society
  - Prof. Jonathan Berek, President
- Society of Gynecologic Oncology
  - Prof. David Mutch, President

Seven Sister Societies: II

- International Society of Gynecologic Pathologists
  - Prof. Elvio Silva, President
- International Federation of Obstetricians and Gynecologists (FIGO)
  - Gynecologic Oncology Committee
- Gynecologic Cancer Intergroup
  - Prof. Henry Kitchener, Chair

Areas for global cooperation

- Basic, translational, and clinical research
- Professional education
- Public education
- Education for policy makers
- Annual and biennial meetings

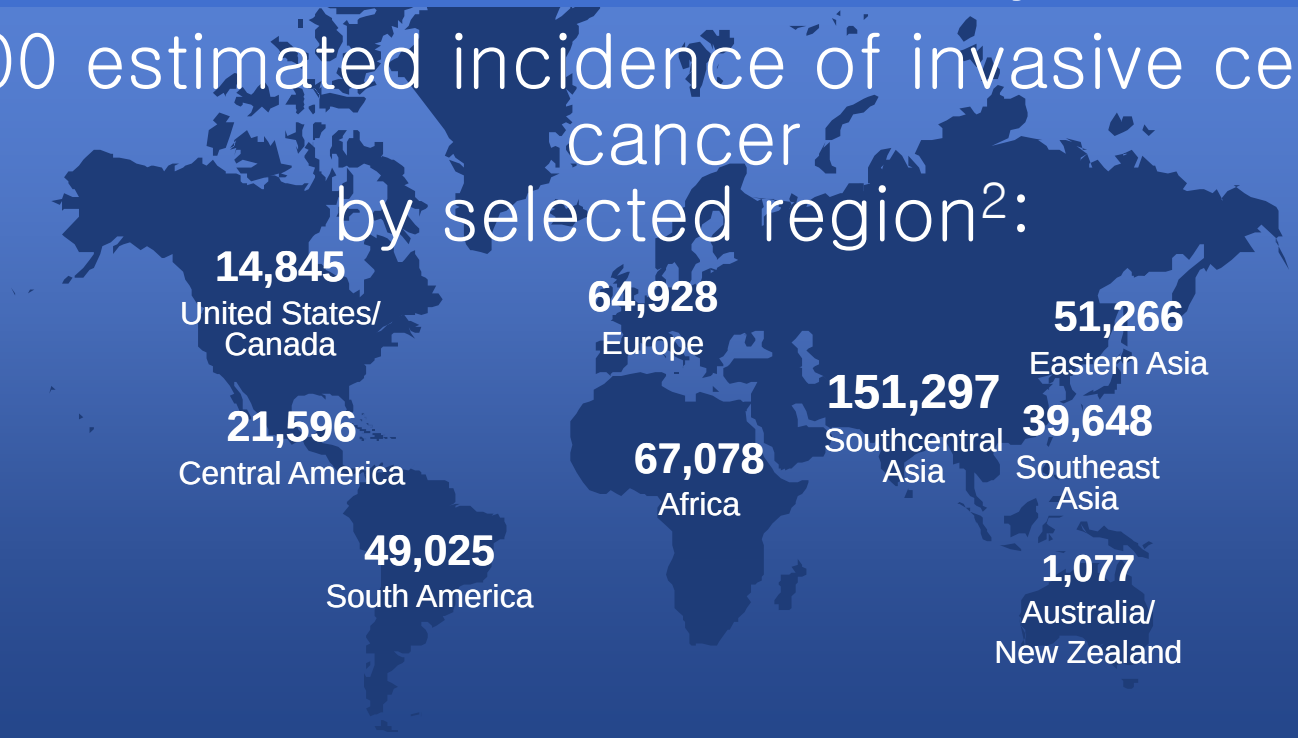
Progress in gynecologic cancer

- Gestational trophoblastic neoplasia
- HPV and cervical cancer
- Epithelial ovarian cancer
- Endometrial cancer

Cervical Cancer Worldwide

Prevalence: 2,274,000 women have cervical cancer[1]
Incidence: 510,000 new cases each year[1]

2000 estimated incidence of invasive cervical cancer by selected region[2]:



Mortality: Second leading cause of female cancer-related deaths (288,000 annually)[1]

1. World Health Organization. Geneva, Switzerland: World Health Organization; 2003:1–74. **2.** Bosch FX, de Sanjosé S. *J Natl Cancer Inst Monogr.* 2003;31:3–13.

HPV and cervical cancer

- Discovery of morphine
- Discovery of radiation
- Development of radical hysterectomy
- Development of Pap smear
- Discovery of HPV as cause
- Development of prophylactic HPV vaccines
- Role of chemotherapy

Cervical cancer control

- Primary prevention
- Secondary prevention
- Treatment
- Symptom management
- Palliation and end-of-life care

Pain control

Friedrich Wilhelm Adam Sertürner isolated morphine, 1804, Germany.

He names morphine after the Greek god of sleep, Morpheus.

Epidemiology

- D Rigoni-Stern (Italy) noted that cervical cancer does not occur in nuns (possible association with sexual activity).
- Giornale per Servire I Progressi della Pathologia e Terapia 1842; 2:507

Development of effective treatment

- Radical hysterectomy
  - John Goodrich Clark, 1895, Baltimore (abdominal)
  - Friedrich Schauta, 1898, Vienna (vaginal)
  - Ernst Wertheim, 1900, Vienna (abdominal)
- Radiation
  - Isolation of radium by Marie and Pierre Curie, Paris, 1898
  - First use of radium to treat cervical cancer, 1903
  - Addition of external beam radiation, 1920s

Secondary prevention

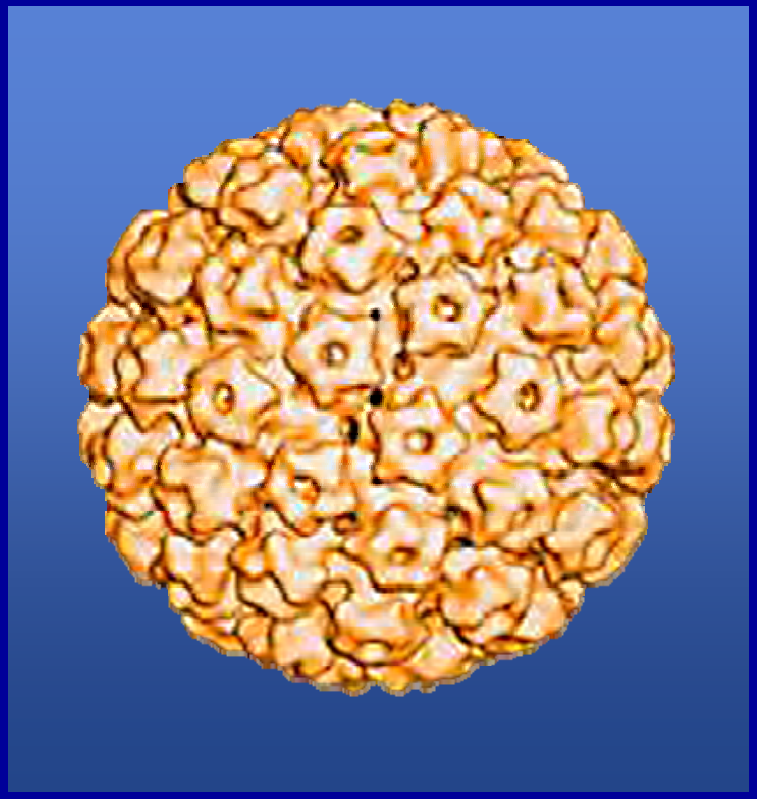
- Prof. George Papanicolaou reported the use of cervical cytology to identify cervical cancer, 1928
- Identification of precursor lesions
- Treatment of preinvasive disease
  - Excision: hysterectomy, conization
  - Ablation:cautery, laser, cryotherapy

Progress against cervical cancer

- Identification of HPV as causative agent
  - Prof. Harold zur Hausen, Germany, 1976
- Epidemiology, natural history, and biology of HPV
- Research into prophylactic and therapeutic HPV vaccines
- Epidemiologic risk factors other than HPV
  - Immunosuppression, cigarette smoking, oral contraceptives, high-risk male partners, etc

HPV

Nonenveloped double-stranded DNA virus[1]

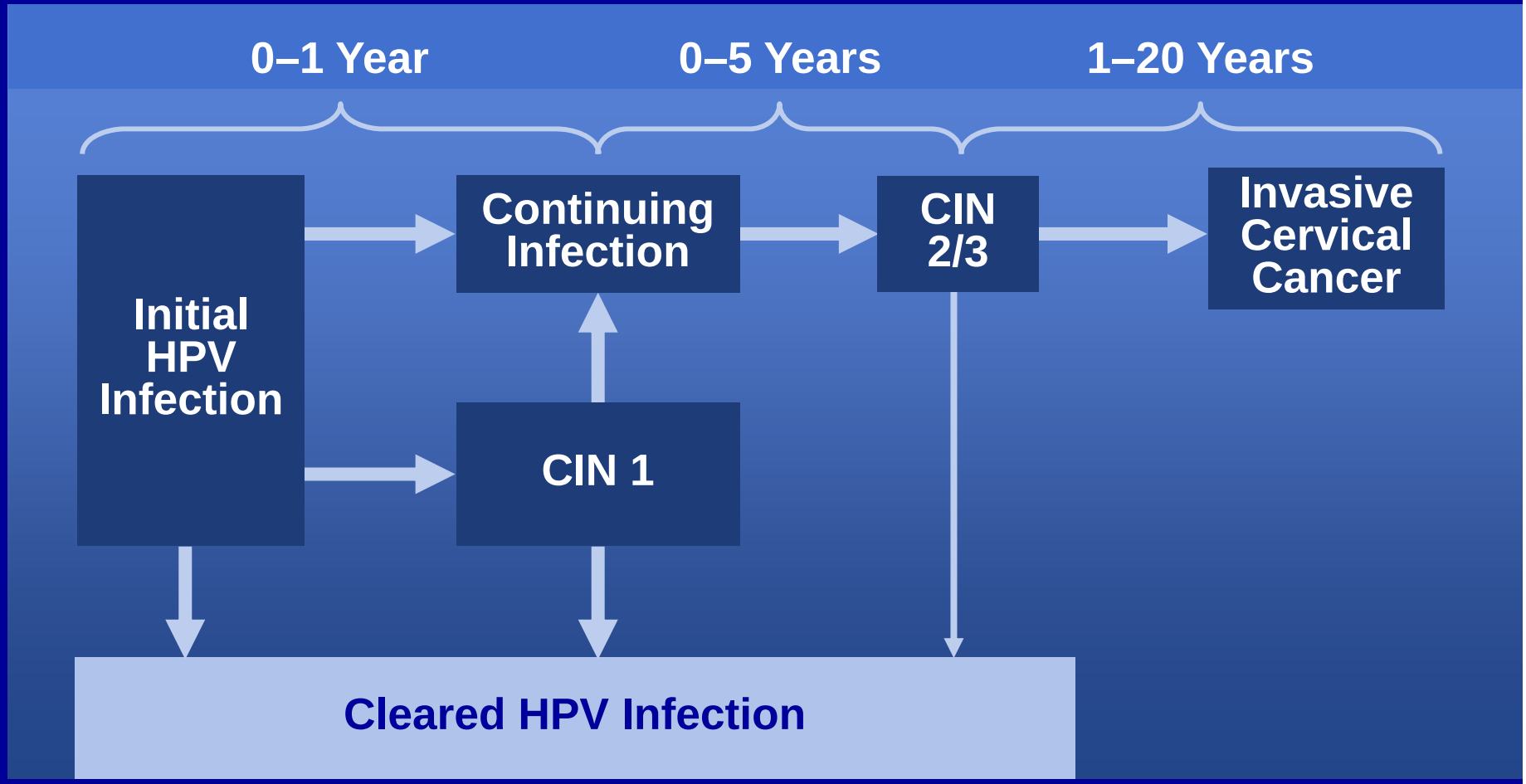


- >100 types identified[2]
- 30–40 anogenital[2,3]
  - 15–20 oncogenic*[,2,3] types, including 16, 18, 31, 33, 35, 39, 45, 51, 52, 58[4]
    - HPV 16 (54%) and HPV 18 (13%) account for the majority of worldwide cervical cancers.[5]
  - Nononcogenic† types include: 6, 11, 40, 42, 43, 44, 54[4]
    - HPV 6 and 11 are most often associated with external genital warts.[3]

*High risk; †Low risk

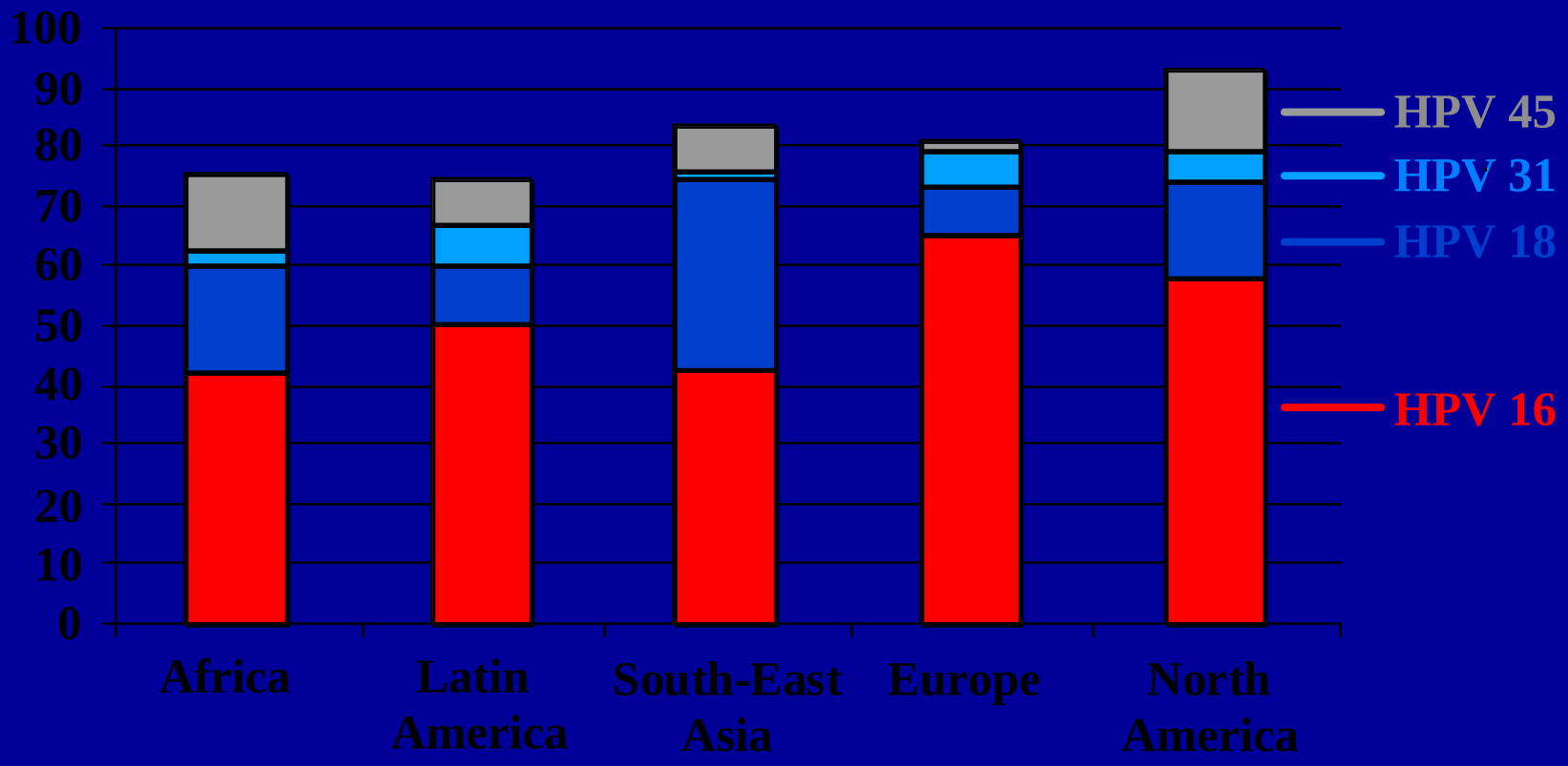
1. Howley PM. In: Fields BN, Knipe DM, Howley PM, eds. Philadelphia, Pa: Lippincott-Raven; 1996:2045–2076. **2.** Schiffman M, Castle PE. *Arch Pathol Lab Med*. 2003;127:930–934. **3.** Wiley DJ, Douglas J, Beutner K, et al. *Clin Infect Dis*. 2002;35(suppl 2):S210–S224. **4.** Muñoz N, Bosch FX, de Sanjosé S, et al. *N Engl J Med*. 2003;348:518–527. **5.** Clifford GM, Smith JS, Aguado T, Franceschi S. *Br J Cancer*. 2003:89;101–105.

Infection and Progression



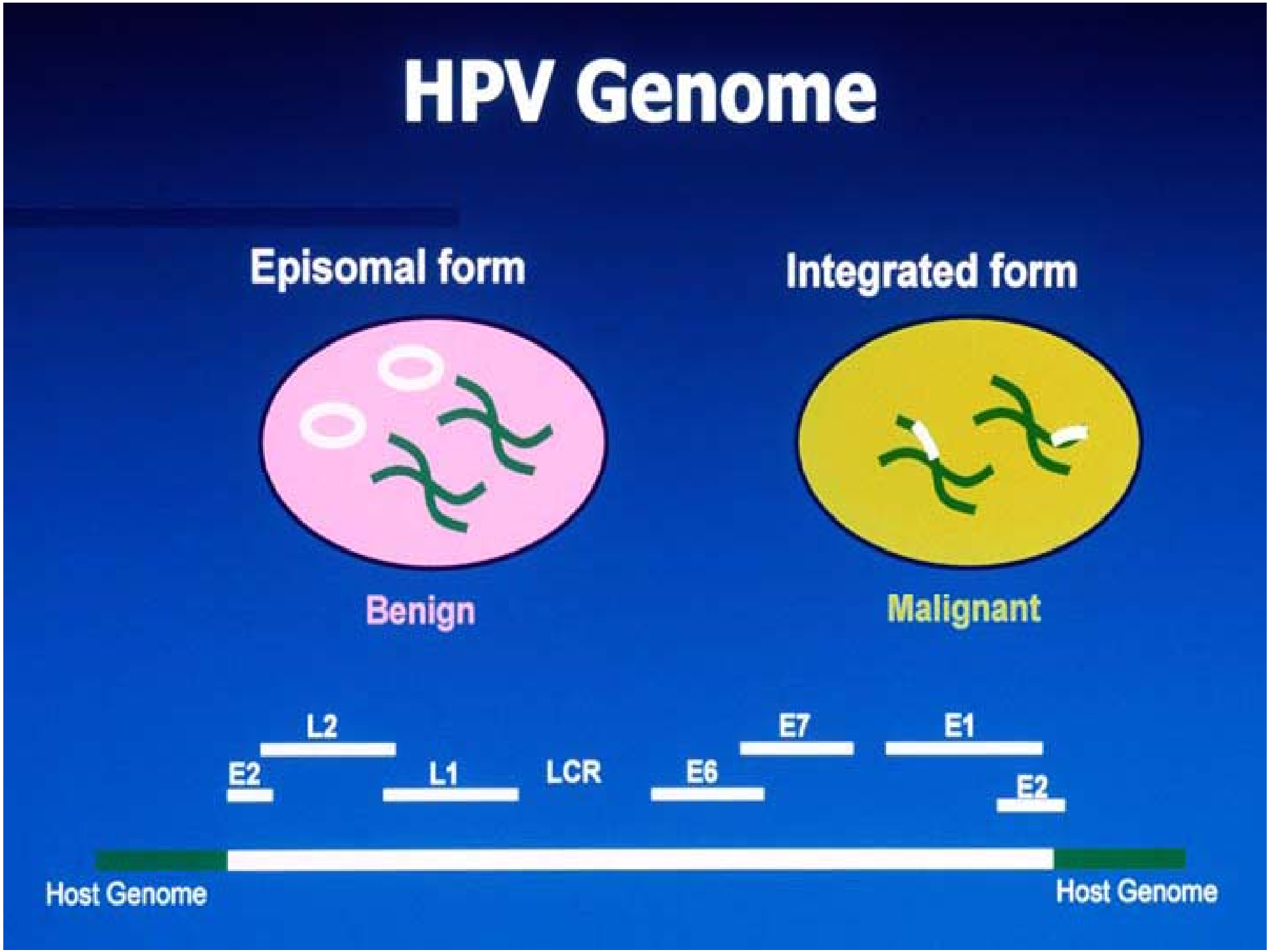
1. Pinto AP, Crum CP. *Clin Obstet Gynecol*. 2000;43:352–362.

Distribution of HPV Types in Cervical Cancer by Geographical Region*



*99% of cervical cancer are HPV DNA positive (Bosch et al, JNCI, 1995)

HPV Genome


Episomal form
Integrated form
Benign
Malignant
L2
E2
L1
LCR
E6
E7
E1
E2
Host Genome
Host Genome

Virus-like particle

- Empty viral capsid
  - Technology developed and licensed from US NCI, University of Queensland, University of Rochester, and Georgetown University
- Phase III trials
  - 99% effective in preventing type-specific CIN 2-3 & VIN 2-3
  - Koutsky L et al, New England J Med 2002; Harper D et al, Lancet 2004

Prophylactic HPV vaccines

- Gardasil® (Merck, etc)
  - Quadrivalent (6, 11, 16, 18)
  - O, 2, and 6 months
  - Approved in 100+ countries
- Cervarix® (GSK)
  - Bivalent (16, 18)
  - 0,1, and 6 months
  - Approved in 100+ countries

NCI Clinical Announcement, 1999

- Five randomized phase III trials comparing radiation to platinum-based chemoradiation
- Significant improvement in progression-free survival and overall survival associated with chemoradiation
- NEJM: Keys et al, Morris et al, Rose et al, Keys et al, JCO: Whitney et al, Peters et al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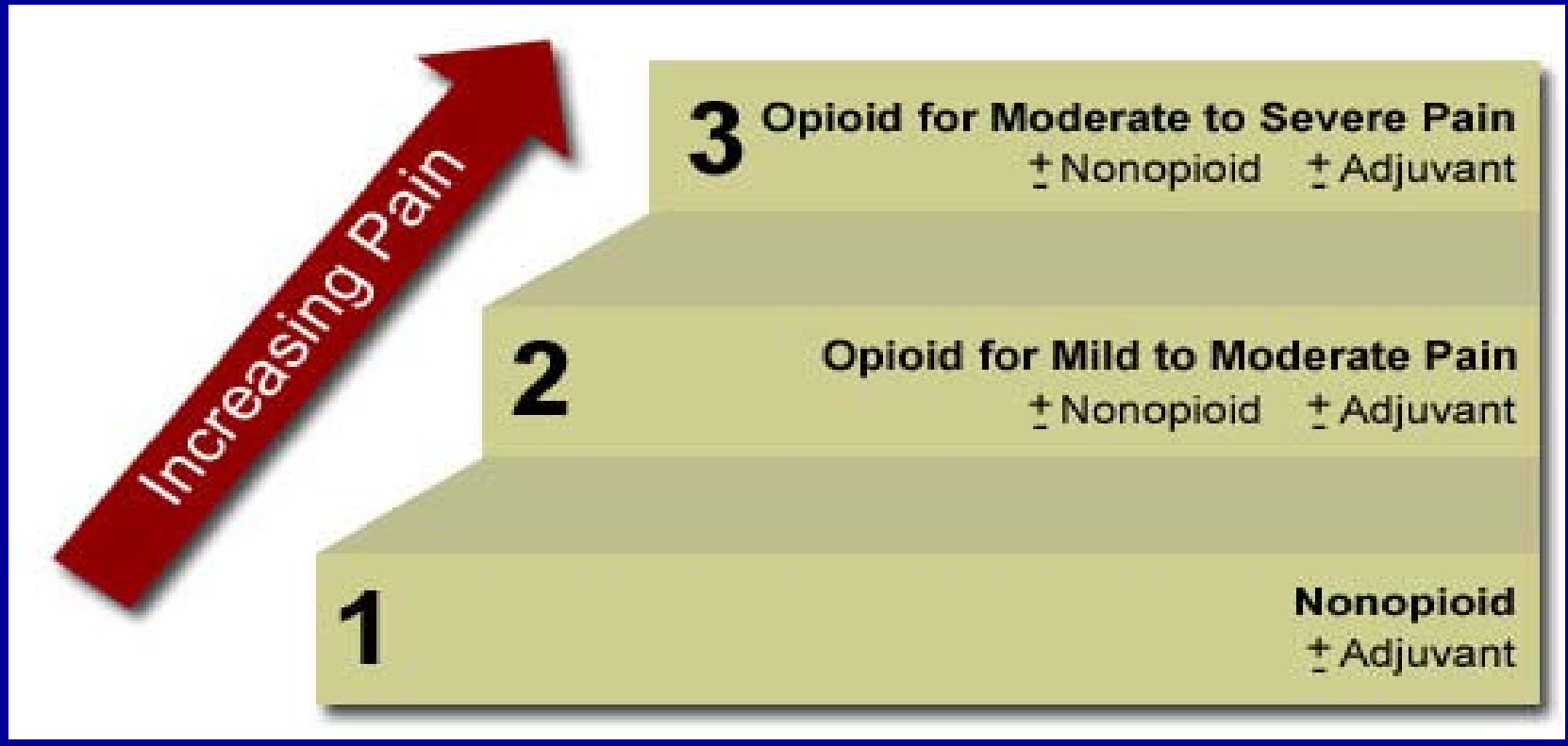
Quality of life and survivorship

- Body image, intimacy, & sexuality
- Bowel, bladder, and vaginal function
  - Prof. Takashi Kobayashi: nerve-sparing radical hysterectomy, 1961
  - Prof. Juan Sardi, neoadjuvant chemotherapy, 1986
- Fertility preservation: radical trachelectomy, 1998; neoadjuvant chemotherapy, 2007


Increasing Pain
3
Opioid for Moderate to Severe Pain
± Nonopioid ± Adjuvant
2
Opioid for Mild to Moderate Pain
± Nonopioid ± Adjuvant
1
Nonopioid
± Adjuvant

End-of-life issues

- Pain control: WHO pyramid
- Preserving renal function
- Preserving GI function
- Controlling hemorrhage
- Psychosocial support for woman and her family
- Education in Palliation & End-of-Life Care for Oncology Curriculum (EPIC-O)

Public policy: National cancer control plans

- World Health Organization
- International Union against Cancer (UICC)
- American Cancer Society
- US Centers for Disease Control
- US National Cancer Institute

Cervical cancer control

- Should be an integral part of national cancer control plans; should include:
  - Primary prevention
  - Secondary prevention
  - Treatment
  - Quality of life and survivorship
  - Palliation and end-of-life care

Primary prevention

- Prophylactic HPV vaccination
- National programs for girls
  - 25 countries committed to public funding
- Issues: cost, acceptability, logistics (school-based clinics versus community-based clinics)

Secondary prevention

- How to track women for compliance with screening and follow-up
- Traditional cytology with colposcopy follow-up
  - Quality assurance for cytology & colposcopy
- HPV as primary screen with cytology follow-up for women aged 25 years or older found to be HPV positive
  - Cost of HPV test
- See-and-treat programs in low-resource settings

Access to treatment

- Geographic
- Financial
- Social support
  - Help with transportation, child care, income
- Symptom management

Surgery for cervical cancer

- Do patients have access to gynecologic surgeons?
- Do doctors have appropriate expertise?
  - Loop excision & cold knife conization
  - Hysterectomy
  - Radical hysterectomy

Radiation for cervical cancer

- Is external beam irradiation and intracavitary irradiation available?
- Is chemoradiation available?
- Do radiation oncologists, physicists, and technicians, have the appropriate expertise?
- Do patients have access to treatment?

Global cooperation in gynecologic cancer

- Basic, translational, and clinical research
- Progress in gynecologic cancers
- Professional education
- Public education
- Education for policy makers

Professional education

- Gynecologic oncology
- Gynecologic pathology
- Radiation oncology
- Medical gynecologic oncology
- Gynecologic oncology nursing

Collaboration with other disciplines

- Epidemiology & biostatistics
- Imaging/ radiology
- Basic and translational research scientists
- Pharmacy & pharmacology
- Psychology & psychiatry
- Rehabilitation and palliative medicine
- Multidisciplinary care and research

Education for patients, families, and general public

- Healthy lifestyle (diet & exercise; tobacco control)
- Prevention of HPV disease
- Appropriate screening for breast, cervical and colon cancer
- Early symptoms of gynecologic cancer
- Importance of cancer research

Policy makers

- Promotion of healthy diet, exercise, and tobacco control
- Access and education regarding prophylactic HPV vaccines
- Support for cancer screening and follow-up
- Multidisciplinary cancer care at centers of excellence
- Access to effective new treatments & palliative care
- Support for academic clinical trials

Lessons learned from sister societies: I

- Gynecologic oncology societies must be multidisciplinary; each medical discipline must be treated with the same respect.
- Geographic rotation of meetings permit more people to attend.
  - IGCS: 3rd mtg: Fukuoka, Japan; 6th mtg, Cairns, Australia; 9th mtg, Seoul, Korea; 12th mtg, Bangkok, Thailand

Lessons learned: II

- Sister societies should schedule meeting dates and sites to complement one another.
- Sister societies should promote one another's meetings.
- Leadership of the sister societies should meet regularly (2–4 times per year) to share information and coordinate educational programs.

Lessons learned: III

- Society meetings should promote academic clinical trials and disseminate the results of important trials.
  - Scientific programs should include an update from the Gynecologic Cancer Intergroup about recently reported trials and ongoing studies.
  - Society meetings are great opportunities for satellite meetings of the GCIG and trial steering committees.

Gynecologic Cancer Intergroup

- Umbrella organization for national and regional groups conducting clinical trials for women with gynecologic cancer
- Meets every 6 months
- 19 groups; GTD Society, Institut National du Cancer (France), NCI-US
- Web site: www.gcig.igcs.org

GCIG Members

- Groups (Asia/Pacific):
  - ANZGOG, Japan GOG, Korean GOG; observers: Chinese GOG, Indian ICOG
- Groups (Europe):
  - AGO-Germany, AGO-Austria, Dutch GOG, EORTC, GEICO-Spain, GINECO-France, MaNGO (Italy), MITO (Italy), NSGO (Scandinavia), Scottish GCTG, UK MRC/NCRN; observers: Irish ICORG; Turkish SGO
- Groups (North America):
  - ACRIN (imaging), GOG, NCI-Canada, RTOG (radiation), SWOG; observers: Mexico Cooperative Group

Upcoming meetings: 2010

- SGO, March 14-17, San Francisco, CA
  - www.sgo.org
- IGCS, October 23-26, Prague, the Czech Republic
  - Abstract deadline May 26, 2010
  - www.igcs.org

Upcoming meetings: 2011

- SGO, March 6-9, Orlando, Florida
  - www.sgo.org
- ESGO, September 11-14, Milan, Italy
  - www.esgo.org
- ASGO
  - www.asiansgo.org

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