**Name: Young Choi Kim, M.D.**

**Home address:** 4 Mountain Laurel Drive

 Greenwich, CT 06831

**Education:**

B.S. Seoul National University, Seoul, Korea, 1960

M.D. Seoul National College of Medicine, Seoul, Korea. 1966

# Career/Academic Appointments:

07/1/1966 –06/30/1967 Rotating Internship

The Jewish Hospital of Brooklyn, Brooklyn, New York

07/1967 – 06/30/1968 Resident, Anatomic Pathology

 The New York Hospital /Cornell University, New York, NY

07/1/1968 – 06/30/1970 Resident, Anatomic Pathology

Boston City Hospital/The Mallory Institute of Pathology,

 Harvard and Boston University Medical School

 Boston, MA

10/1/1969- 04/30/1970 Visiting Fellow, Cytopathology

Memorial Sloan-Kettering Hospital, New York, NY

07/1//1970 – 06/30/1972 Resident and Instructor, Clinical Pathology

 Upstate Medical Center

 Syracuse, New York

 All the section of Clinical Pathology and Transplantation

 Immunology and Immunopathology

 2nd year focused on transfusion medicine and HLA typing.

10/1/1983- 12/31/1983 Visiting Investigator in Cellular Immunology (sabbatical)

Memorial Sloan-Kettering Hospital, New York, NY

07/1/1972 –06/30/1989 Assistant Professor of Pathology

 Albert Einstein College of Medicine, Bronx, NY

07/1/1990 –06/30/1995 Associate Professor of Pathology

 Albert Einstein College of Medicine, Bronx, NY

07/1/1995 – 04/30/2001 Professor of Pathology

 Albert Einstein College of Medicine, Bronx, NY

07/1/1998 – 06/30/2001 Visiting Professor of Pathology

 Inje Medical School, Seoul, Korea

05/1/2001 – present Professor of Pathology

Yale University School of Medicine, New Haven, CT

07/1/2005 – present Professor of Pathology and Lab Medicine

Yale University School of Medicine, New Haven, CT

# 8/31/2016 - Professor, Emeritus, Pathology and lab Medicine

 Yale University School of Medicine, New Haven, CT

# Administrative Positions:

07/1/1972 – 06/30/1976: Associate Pathologist

 Created Immunopathology Laboratory

 The Bronx-Lebanon Hospital Center,Bronx, NY

07/1/1972 – 08/31/1999: Chief of Immunopathology

 Chief of Cytopathology

 The Bronx-Lebanon Hospital Center

 Bronx, NY

07/01/1976 – 08/31/1999: Attending Pathologist

 The Bronx-Lebanon Hospital Center, Bronx, NY

07/01/ 1988 Initiated and formulated the Immunopathology Fellowship program with an approval from the American Board of Pathology for two fellows per each year

07/01/1988 –08/31/1999: Director of Immunopathology Fellowship Program

 Expansion and introduction of Immunopathology Lab tests

 including tumor markers, lymphoma work-ups and

 other diagnostic immunology tests

07/01/1989 Created Molecular Pathology Laboratory

 Introduction of various molecular pathology lab

 Procedures: PCR, ISH, PCR-ISH, Southern blot,

 gene rearrangement and various hybridization tests

 Bronx-Lebanon Hospital, Bronx, NY

07/01/1989 – 08/31/1999: Director of Molecular Pathology Lab

 Bronx-Lebanon Hospital, Bronx, NY

07/01/1990 – 08/31/1999: Chairman of Pathology and Lab Medicine

 The Bronx-Lebanon Hospital Center, Bronx, NY

07/01/1990 – 08/31/1999: Director of Pathology Residency Program

 The Bronx-Lebanon Hospital Center, Bronx, NY

07/01/1990 – 08/31/1999: Chair, QA Committee of Pathology

 The Bronx-Lebanon Hospital Center, Bronx, NY

07/01/1990 – 08/31/1999: Director of Martin Luther King Health Center Lab

 Bronx, NY

07/01/1988 –06/31/93: Institutional Research and Publication Committee Member

 The Bronx-Lebanon Hospital Center, Bronx, NY

07/01/1990 – 08/31/1999: Graduate Medical Committee

 Library Committee

 House Staff Affairs Committee

 Patient Care Advisory Committee

 Utilization Management Committee

 The Bronx-Lebanon Hospital Center, Bronx, NY

07/01/1990 – 08/31/1999: Chair, Transfusion Committee

 The Bronx-Lebanon Hospital Center, Bronx, NY

07/01/1994 – 08/31/1999: Formulated Cytotechnology School

 Medical Director of Cytotechnology School

Bronx-Lebanon Hospital Center, Bronx, NY

09/01/1999 – 04/30/2001: Attending Pathologist

 Montefiore Medical Center, Bronx, NY

07/01/2000 – 04/30/2001: Medical Director

 MontePATH Reference Laboratories

 Montefiore Medical Center, Bronx, NY 10467

05/01/2001 – 10/17/2010: co-Vice Chair of Pathology

 Yale University School of Medicine

 New Haven, CT

05/01/2001 –10/17/ 2010 Chairman of Pathology and Lab Medicine

 Bridgeport Hospital, Bridgeport, CT

 Section Chiefs of Chemistry, Microbiology, Virology, Hematology and Coagulation, Immunology, Toxicology

05/01/2001- present Medical Director of Blood Bank

 Bridgeport Hospital, Bridgeport, CT

07/01/2003 – 06/30/2009 Admission committee

 Yale University School of Medicine, New Haven, CT

07/01/2005- present Medical Advisory Board

 Connecticut American Red Cross, Farmington, CT

07/01/2009- present Chair of Transfusion Committee

 Bridgeport Hospital, Bridgeport, CT

10/18/2010 – present Director of Clinical Laboratories

 Bridgeport Hospital, Bridgeport, CT

**Board Certification:**

Anatomic and Clinical Pathology, 05/ 1972

Immunopathology, 12/ 1984

Cytopathology, 06/ 1991

Certified Medical Acupuncturist, 07/1998

**Professional honors & recognition, International/National/Regional**

02/28/1962 – 03/01/1966“Samsung” Scholarship, an outstanding student award, 4 years

 Seoul National College of Medicine, Seoul, Korea

2002 The 6th Hamchoon Alumni Research Award, Alma Mater,

 the SNUCMAA, Seoul, Korea

2001 Master degree in Art, Yale University (honorary)

**Research Support**

**Current Support:**

* Agency: DongA Pharmaceutical, Inc, Seoul, Korea

Tttle: The emerging role of ER-beta in breast cancer.

P.I.: Young J Choi, M.D.

Percent effort: 1%

Direct cost/year: $35,000

Total costs for project period: $125,000

Project period: 01/01/2010 -4/1/2014

Two research Associates from DongA Pharmaceuticals, Seoul, Korea

* Agency: NHLBI

Title: Recipient Epidemiology and Donor Evaluation Study-III(REDS-III)

Contract: HHSN2682011000061

P.I.: Edward Snyder, M.D

Role on Project: Co-Investigator

Percent effort: 10%

Direct cost/year: $1,000,000

Total costs for project period:$10,000,000

Project period: 03/15/2011 -12/31/2018.

 Biomarker testing for Barrett’s and Dysplasia and Esophageal cancer

Agency : The Klein family

 P.I: Young Choi

 Percent effort: 5%

 Direct cost: $11.000

 Date: March 6, 2015 -8/31/2017

**Completed support:**

* Agency: CDC

CONTRACT #: 200-93-0683:

Title: Sentinel Hospital Surveillance Project for HIV Infection

P.I., J. Ernst. M.D.

Role on Project: Co-Investigator.

Percent Effort: 10%

Total costs : $577,500

Project period: 07/01/1993 - 06/30/1996

* Agency :CDC

Contract # : U64-CCU 206797-03

Title: HIV Serosurvey Program

P.I. J. Ernst, M.D.,

Role on Project: Co-Investigator

Percent Effort: 10% effort

Total costs: $ 562,500

Project period: 10/01/92-09/29/95

* Agency: the New York State Department of Health through Rate Appeal,

Title: Cytotechnology training Grant

P.I., Young Choi, M.D.

Percent Effort: 30%

Total; costs: $90,000

Project Period: 01/01/94-12/31/95.

* Agency : American Cancer Society

Contract #: 94-7

Title: Cytotechnology Training Grant

P.I., Young J. Choi, M.D.

Percent Effort: 15%

Total costs: $30,000

Project period: 01/01/95 -12/31/95

* Agency: Centecor, Inc. Fund

Title: Evaluation of Syphilis IgG EIA Testing

P.I., Young J. Choi, M.D.

Percent Effort: 20%

Total costs: $10,000

Project period: 05/21/94 -12/20/94.

* Agency: Abbott Diagnostic Comp.

Title: Evaluation of Abbott Test Pack Plus HCG Assay,

P.I., Young J. Choi, M.D.

Percent Effort: 20%

Total costs: $10,000

Project period: 06/5/95-9/8/95

**Course Syllabus**:

* Koss L, Sanchez M, Choi Y. Diagnostic Cytology Course. pp1-150, May 1996.

**Courses : International/National**

• **Cytotechnology School**( Bronx-Lebanon), one year post Baccalaureate Technology School; Medical Director for the entire course; affiliated with Montefiore Medical Center and Bronx-­Lebanon Hospital Center; 8/1994-8/1999, Bronx, New York

• **Diagnostic Cytology Course** for the Korean Pathologists sponsored by the Korean Pathologists Association, April 26-May 1, 1996, Seoul, Korea, conducted by

 Drs. Leopold Koss, Young Choi and Miguel Sanchez.

• **Quality Assurance course** in diagnostic cytology for Korean Pathologists and Cytotechnologist; sponsored by the Korean Pathologists Association; June 4, 1999, Seoul, Korea

• **Immunopathology Course**,”Immunity and Diseases” for the second year medical students in Inje Medical School, Seoul, Korea, May 24 - June 4, 1999

• **Scientific Chair**, 18 hour CME Course for the 16th Annual Scientific Convention for the SNUCMAA of North America, July 1-5, 1998, Bermuda.

• **Scientific Chair**, the 19 hour CME Course, for the 18th Annual Scientific Convention for the KAMA, Jan 28-February 1, 2001, Las Vegas, NV.

• **Scientific co-Chair**, for the 16 hour CME Course, for the 18th Annual Scientific Convention for the SNUCMAA of North America, June 28-July 1, 2001, Canada

• **Scientific co-Chair** for the16 hour CME Course, for the 19th Annual Scientific Convention for the KAMA, Dec 26, 2001- January 1, 2002, Palm Spring, FL

• **Scientific Chair**, for the 15 hour CME Course for the 2003 KAMA scientific convention,

 Dec. 28, 2003- Jan.1, 2004, Orlando, FL

* **CME Chair** for the KAMA annual scientific meeting held in Palm Spring, CA, 2004
* **Chair of the Research and Fellowship**, The SNUCMAA of North America, 2004-2005
* **Chair of the Scientific Committee**, The SNUCMAA of North America, 2005-2006

**Invited Lectures: International/National:**

• Vasectomy and its sequel at the Korean Women’s Medical Society, Seoul, Korea, 1973

• Immunopathology of Renal Lesions, Seoul National College of Medicine, Seoul, Korea,

1973.

• Demonstration of Immune Reaction in formalin-fixed paraffin-embedded sections, Seoul National College of Medicine, Seoul, Korea, 1973.

• Immunologic sequel of vasectomy; Lymphocytotoxic and autoantibodies at the **6th** Joint Medical Congress of Korea-U.S.A.Centennial, May 1982.

• Immunofluorescence in Paraffin-Embedded Tissues: effect of enzyme treatment, at the 8th International Convocation of Immunology, Buffalo, NY, June 1982.

• In-Situ Hybridization for Microbiology Laboratory at the Annual Seminar in Microbiology at the St. Luke’s Hospital, New York, Sept. 1988.

• In-Situ Hybridization in Diagnostic Pathology, Enzo Biochem Laboratory, New York, Oct. 1988

• Molecular Biology in Medicine, Seoul National College of Medicine, Seoul, Korea Oct. 1988

• Identification of Mycobacterium by nucleic acid hybridization at the 12th Joint Congress of Korean-American Medical Association, May, 1988

• Rapid Identification of Human Papillomavirus DNA by In-situ hybridization, at the American Association Obstetrics/Gynecology Convention, May, 1989, Atlanta, Georgia.

• Human Papillomavirus and Cervical Neoplasia at the Bronx-Lebanon Hospital Day, Nov. 1989.

• Polymerase Chain Reaction at the Bronx-Lebanon Hospital Day, Nov. 1990.

• Brain as Reservoir of HIV Infection, at the Bronx-Lebanon Hospital Day Nov. 4, 1991.

• Prognostic Indicators of Ovarian Epithelial Tumors of Low Malignant Potential (LMP):

DNA ploidy, oncogene expression, and histologic features. FASEB/OSMA., April 1992.

• Changing patterns of autopsy findings in AIDS for 10 year postmortem study at the Bronx-Lebanon Hospital Day, Nov. 1993

• Quantitative markers to monitor clinical state and progression of HIV infection:

 HIV viral burden, CD4 + cells count and P24 antigen expression. The Role of HIV induced immunosuppression to the Bronx Lebanon Medical Staff, 1993

• Human Papillomavirus Infection and Cervical Neoplasia at the Annual Amer OBS& GYN Convention, May, 1993

• Human Papilloma Virus Infections and Cervical Neoplasia. at The Korean-American Medical Association Annual Convention, Dec. 1994, Orlando, Florida.

• Clinical significance of hepatitis C virus viral load in HCV-associated hepatitis. at the Korean-American Medical Association Annual Convention, Dec. 1996, Tampa, Florida

• Helicobacter pylori and Gastric Cancer; at the Korean-American Medical Association Annual Convention. Dec. 1997, Phoenix, Arizona,

• The most useful tumor marker in differentiating malignant melanoma from other melanocytic tumors. At the Annual Tumor Marker Oncology Meeting, 1998

• Hepatitis Cviral infection and HCV RNA viral load; at the Seoul National College of Medicine of North America Annual Convention, June 29, 1998, Bermuda

• Clinical significance of viral load in HCV and HBV infections.

-the 18th Annual KAMA Scientific Convention, Dec 28, 2001, Las Vegas, NV

• Diets and growth factors in breast cancer: Presented at the 20th Annual SNUCMAA

 Convention, Ellicott City, MD, July 2, 2003.

* The current trend and update in Laboratory Medicine: Personalized Medicine:

 at the Kyung Hee University School of Medicine, October 17, 2008, Seoul, Korea

* The Past, Present and Future Challenges: Integrated health Care, Lecture given at the 26th Annual convention of the ANUCMAA of North America. July 5, 2009, Dearborn, Michigan
* The Past, Present and Future Challenges: Integrated health Care, Lecture given at the Kyung Hee University School of Medicine, Seoul, Korea. March 5, 2010.

**Journal services:**

2009- present Editor, for the Applied Immunohistochem Mol Morphol

 Journal

**Reviewed Manuscripts:**

* Detection of HPV-DNA by a PCR-Based Method in Formalin-Fixed, Paraffin-Embedded Tissue from Rare Endocervical Carcinoma Types, 2009
* Concordance Between Semiquantitative Immunohistochemical Assay and Oncotype DX™ RT-PCR Assay for Estrogen and Progesterone Receptors, September, 2009
* Nuclear survivin is associated with malignant potential in epithelial ovarian carcinoma, Concordance between Tissue Microarray and Whole Section Estrogen Receptor Expression and Intratumoral Heterogeneity, January 2010
* A Robust Immunohistochemical Assay for Detecting PTEN Expression in Human Tumors, 2010
* Proliferation (Ki-67 and Phosphohistone H3) and Oncotype DX Recurrence Score in Estrogen Receptor-Positive Breast Cancer, 2010
* HER2 Expression in Breast Cancer with Chromosome 17 Polysomy and Non-Amplified HER2, 2011
* Concordance between Tissue Microarray and Whole Section Estrogen Receptor Expression and Intratumoral Heterogeneity, 2011
* Water bath with pressure cooker antigen retrieval in immunohistochemistry: a comparative study, 2012
* Correlation between HER2 Determined by Fluorescence In Situ Hybridization and Reverse Transcription Polymerase Chain Reaction of the Oncotype DX Test.2012

**Professional Service for Professional organizations**:

**Yale Medical School Committees:**

2003 -2010 Medical School Admission committee

 Yale University School of Medicine, New Haven, CT

**Medical School Committees/SNUCMAA of North America:**

2010 to present : Charity Committee Chair

 SNUCMAA of North America, Flushing, NY

2008- 09 Nominating Chair

 SNUCMAA of North America, Flusing, NY

2007-08 President,

 SNUCMAA of North America, Flushing, NY

2005-06 Chair, Scientific Committee

 SNUCMAA of North America, Flushing, NY

2003–04 Chair of Continuing Medical Education

 The Korean-American Medical Association

 USA , Flushing, NY

2003-05 Chair, Research and Fellowship Committee

 The SNUCMAA of North America, , Flushing, NY

2000 –00 Chair, Scientific Committee for the Korean-American

 Medical Association, Englewood, NJ

1998 –2003 Associate Editor and Editor for Journal of the Korean-

 American Medical Association (KAMA), Englewood, NJ

1997 –98 Chair of Scientific Committee, 15th Annual Scientific

 Convention for the SNUCMAANA, Flushing, NY

1997 – 00 Chair, The Research and Fellowship Committee

 The SNUCMAA of North America, Flushing, NY

1991 – 97 Senate, Albert Einstein College of Medicine,

 Bronx, NY

1991 – 93 Committee of By-laws of Pathology Residency

**Pathology Organizations:**

1992 – present Inspector for the College of American Pathologists

 (CAP) accreditation. Chicago, IL

1980 – 1985 Inspector, Cytopathology Laboratories for the American

 Society of Cytology ( ASC)

**Hospital Committees:**

1991 – 97 Senate, Albert Einstein College of Medicine,

1990 – 99: Graduate Medical Committee

 Library Committee

 House Staff Affairs Committee

 Patient Care Advisory Committee

 Utilization Management Committee

 The Bronx-Lebanon Hospital Center, Bronx, NY

2001- 2010 Patient Care Review Committee

 Medical Executive Committee

 Chairman Committee

 Library Committee

 Safety Committee

 Point –Of –Care Testing committee

 Transfusion Committee

 Breast Cancer Committee

 Infectious Control Committee

 Bridgeport Hospital. Bridgeport, CT

2009- present: Chair of Transfusion Committee

 Infection Control Committee

 Safety Committee

 Point-of Care –Testing committee

 Bridgeport Hospital, Bridgeport, CT

**Pathology Residency Program:**

1991 – 1993 ACGME

Committee of By-laws of Pathology Residency

 Chicago, IL

**Professional Society/membership:**

American Association of Blood Bank

 The United States and Canadian Academy of Pathology

 College of American Pathologists

 The Korean American Medical Association

**Bibliography:**

**Peer-Reviewed Original Research:**

1. **Choi YJ**, Reiner L: Immunoblastic sarcoma following Waldenstrom’s

Macroglobulinemia. Am J Clin Pathol 1979; 71:121-124.

2. **Choi, YJ, R**einer L: Syphilitic lymphadenitis. Am J Surg Pathol 1979; 3: 553 – 555.

3. **Choi, YJ,** Reiner L: Immunofluorescence in paraffin-embedded sections. Am J Clin Pathol 1980; 74: 853.

1. **Choi YJ,** Reiner L Ney C: Immunological observations following vasectomy.

Experientia 1979; 35: 1243 – 1244.

1. **Choi YJ,** Reiner L: Immunofluorescence of renal lesions in paraffin-embedded and

fresh-frozen sections. Am J Clin Pathol 1980; 73: 116-119.

1. Kim TH, **Choi YJ,** Reiner L: Ultrastructural “Fingerprint” in cryoprecipitate and

glomerular deposits. Human Pathol 1981; 12: 86-90.

1. **Choi YJ,** Wong M: Double light chain production in leukemia. Am J Hematol 1981; 11:

93-98.

1. Amaral L, **Choi YJ,** Schreiber Z et al: The effect on the synthesis of RNA by isolated

T & B lymphocytes of normal donors and patients with chronic lymphocyte leukemia.

Am J Clin Pathol 1981; 73:382-387.

1. Amaral L, Taninco J, **Choi YJ,** et al; Responses of chronic lymphocytic leukemia

 Lymphocytes to increasing concentrations of Phytohernagglutinin during short term

#####  Culture. Inter J Clinic Pharma Therap Toxicol 1982; 20: 265-269.

1. **Choi YJ,** Reiner L: Immune response following vasectomy, (Human and NZB Mice). NY State J Med 1983; 83: 819-822.
2. Davey D, **Choi YJ,** Cohen B: Hepatitis B Virus: Possible cause of serositis in

 Hemodialysis patients. Nephron 1983; 33: 186-188.

1. **Choi YJ:** In situ hybridization using biotinylated HBV DNA probe on formalin-fixed

 Paraffin-embeddded sections of liver biopsies: In-situ hybridization superior to

 Immunohistochemistry. Modern Pathol 1990; 3: 343-347.

1. **Choi YJ:** Detection of Human Papilloma virus DNA on routine Papanicolaou smears by

in situ hybridization using biotinylated probes. Amer J Clin Pathol 1991; 96: 475-480.

14. Albu E, Miller BM, **Choi YJ** et al.: Diagnostic value of C-reactive protein in acute appendicitis. Dis Colon Rectum 1994; 37:49-51.

15. **Choi YJ,** Hu Y, Mahmood A.: Clinical significance of PCR detection of Mycobacterial infection. Amer J Clin Pathol 1996; 105:200-204.

16. Sagerman P**, Choi YJ**, Hu Y, Niedt G.: Differential expression of Human Papilloma Virus in the presence and absence of squamous cell carcinoma of the vulva Gynecologic Oncology 1996; 61: 328-332.

17. Sehonanda A, **Choi YJ**, Blum A: Changing patterns of autopsy findings among persons with AIDS in an Inner-City population. Arch Pathol Lab Med 120: 459-464, 1996.

18. Hong T, Nsamukong J, Millett W, Kish A, Win K, **Choi YJ.** Direct application of E test to Gram positive cocci from blood cultures: Quick and reliable

minimum inhibitory concentration data. Diagn Microbiol Infect Dis 1996; *25:* 21-25.

19. Boctor FN, Mi NM, **Choi YJ**, Morse EE. Exchange transfusion with red blood cells preserved in Adenine clears a child of severe Falciparum Malaria. Annals Clin Lab Sci 1998; 27: 193-195.

1. **Choi Y**, Putti T, Win K, Hu Y: Viral RNA level: A better indicator for hepatitis C virus infection than alanine aminotransferase and histopathology. J of KAMA 1998; 4:41-45.

21. Orda AO, Mi NM**, Choi YJ et al**. The diagnosis of acute myelocytic leukemia with low peripheral blood white cell counts. Pitfalls and usefulness of cytochemistry and flow Cytometry. Lab Med 1998; 67:

22. Kimura’s disease; A case report and review of literature. Gumbs M, Pai N, Saraiya R, Lakshmy V, **Choi Y**. J Surg Oncol 1990; 70: 190-193.

23. Moniem H, **Choi YJ**, Niedt W: Expression of Ki-67, PCNA, p53 and HMB-45 in melanocytic lesions. J Tumor Marker Oncol 1999; 14(3); 11-17.

24. **Choi Y,** Putti T, Win K, Hu Y, Remy P, Bloom A. Correlation of Viral RNA, alanine Aminotransferase and histopathology in Hepatitis C virus-Associated hepatitis. Molecular Diagnosis 1999; 4: 251-254.

25. Jhao J, Sulh M, Hu Y, Parithival V**, Choi Y**: Primary small cell carcinoma of the rectum in a patient with HIV infection J of KAMA 1999; 5:23-26.

26. Kanaan H., Putti 1, Schreiberi, **Choi Y**: Erythema Multiforme of esophagus J of KAMA 2000; 6: 72-74.

1. **Choi Y:** Multicultural aspect of breast cancer. J of KAMA 2001; 7: 43-48.
2. **Choi, Y.** Diets and growth factors in breast cancer. J of KAMA 1003; 9:27-34.
3. **Choi,Y,** Pinto,M**:** Estrogen receptor beta in breast cancer: Hormonal receptors and

And other biomarkers. Applied Immunohistochem Mol Morphol 2005; 13: 19-24.

1. Ma L, Bindarchi B, Sasaki S, Levine S, **Choi Y**. Primary localized laryngeal: With long-term follow-up and review of the literature. Arch Pathol Lab Med 2005; 129:215-218.
2. **Choi Y**, Pinto M, Hao L, Riba A. Interobserver variability and aberrant E-cadherin immunostaining of lobular neoplasia and infiltrating lobular carcinoma. Modern Pathol 2008; 21:1224-1237.
3. **Choi Y**. Relative levels and co-expression of ER alpha and ER beta in breast cancer( in preparation)
4. **Choi,Y**. Estrogen receptor beta in breast cancer: review article ( In preparation for the AIMM journal)
5. **Choi, Y, Bedford, A**. Early detection of barrett’s esophagus by specific biomarkers and FISH ( in preparation)

**Abstracts:**

1. Henry JE**, Choi YJ**: Immunological Consequences of vasectomy: cytotoxic antibodies in vasectomized men. Presented at AABB-ISBT International Congress. Abstract published in Transfusion Congress Proceeding, P 22, 1972

2. **Choi YJ,** Reiner L: Immunofluorescence in formalin-fixed paraffin-embedded sections.Federation Proceedings, 40: 830, 1981

*3.* **Choi YJ**: Immunoreactivity of complement in paraffin-embedded sections. Presented and abstract published at International Immunology Conference, Defined

Immunofluorescence, Immunoenzyme Studies and Related Labeling Techniques, P*55,* 1982.

4. **Choi YJ**: Immunologic sequelae of vasectomy; Lymphocytotoxic and autoantibodies. Presented and abstract published at the 6th Joint Medical Congress of Korea-U.S.A. Centennial, May 1982.

1. **Choi YJ,** Kagan K: The autologous mixed lymphocyte reaction in Systemic Lupus Erythematosus. Presented and abstract published at the 8th International Convocation of Immunology, June 1984.
2. **Choi YJ**: Diagnostic application of HBV DNA probe vs antibodies to HBV antigen in liver biopsies. Presented at the XIV World Congress of Anatomic and Clinical Pathology and abstract published in Proceeding, p 22, 1987

7. **Choi YJ**, Yee N, Bauer S: Effect of fixation on in-situ hybridization. J. Histochem 36:

895, 1988.

1. **Choi YJ**: Identification of Mycobacterium by nucleic acid hybridization. Presented at the 12Joint Congress of the Korean-American Medical Association and abstract. published in proceeding, p36, 1988.

9. **Choi YJ**, Yee N, Bauer S: Identification of Human Papilloma Virus DNA on PAP smears. J Cellular Biochem 1989; 39:12.

1. **Choi YJ**, Bauer S: Factors influencing in in-situ hybridization on paraffin-embedded sections. Lab Invest 1989; 60: 17A. **-**Presented at the International Academy of Pathology Conf, 1989.
2. **Choi YJ:** Diagnostic efficiency of in-situ hybridization using a biotinylated DNA probe on formalin-fixed liver biopsies with HBV infections. Lab Invest 1989; 60: 17A.

-Presented at International Academy of Pathology conf.,1989

1. **Choi YJ,** Moy KF, Pulakhandam UR, Bauer S: Detection of human immunodeficiency virus in formalin-fixed paraffin-embedded sections of brain tissues in AIDS by polymerase chain reaction. Lab Invest 1990; 62: 18A.

-Presented at the International Academy of Pathology Conf.,1990.

1. **Choi YJ**, Pulakhandarn UR, Moy KF, Aktaruzzman M, Bauer S: Incidence of HTL V-lI infection in AIDS. Lab Invest. 1990; 62: 18A.

Presented at International Academy of Pathology conf.1990.

14. **Chol YJ,** Parente J, Bauer S:Detection of Human Papillomaviruses in exfoliated

cervico-vaginal cells by In-situ hybridization using biotinylated probe. Lab. Invest.

1990; 62:19A.

 -Presented at the International Academy of Pathology Conf., 1990.

15**. Choi YJ,** Moy K, Pulankhandam U, Bauer S: High prevalence of HIV and HTLV-11 infections in clinically unsuspected autopsies. Lab. Invest. 1990; 62: 19A. -Presented at International Academy of Pathology conf.,1990.

1. **Choi YJ,** Rho T: Incidence of Human Papilloma Virus infection of Korean women residing in the United States.

**-**Presented and abstract published at the Human Papilloma Virus Conference proceedings, Sept. 1990.

17. Gerwel M. **Choi YJ,** Amsel M, Levy 3, Bennett B,: Prognostic indicator of breast

 cancers: Correlation of DNA ploidy, oncogene expression, hormonal receptors and

 histological gradings. Amer J. Clin Pathol 1991; 96: 403.

 -Presented at the Amer Soc Clin Pathologists meeting,1991.

18. Ree HJ, Khan, Shibata, **Choi YJ**, Teflitz: Lewis X staining can detect infected

 Langerhans cells in HIV-associated lymphadenopathy: A diagnostic feature for

 persistent generalized lymphadenopathy (PGL). Lab Invest. `991; 64:82A.

 -Presented at the International Academy of Pathology Conf, 1991.

1. **Choi YJ:** Detection of Human,Papilloma Virus DNA in cervical smears and biopsies by

 in-situ hybridization using biotinylated probes: smear is superior to biopsy. Lab Invest.

1991; 64:23A.

-Presented at the International Academy of Pathology conf.1991

1. **Choi YJ: Koilocytes** and Human Papillomavirus infection. Lab Invest 1991; 64: 23A.

-Presented at the International Academy of Pathology conf.,1991

1. **Choi YJ,** Rho T, Ren W, Quarles C, Yee N: Human Papillomavirus infection and cervical Neoplasia in Korea women. Amer J Clin Pathol 1991; 96:407.

-Presented at the Amer Soc Clinical Pathologists meeting, 1991.

22. **Choi YJ**, Pulakhandarn U, Moy K. :Detection of HJV DNA from skeletal muscle in AIDS with muscle weakness. Amer J Clin Pathol, 1991; 96:407.

-Presented at the Amer Soc Clin Pathologists meeting, 1991.

1. **Choi YJ:** Possible immune mechanism in dysfunctional uterine bleeding. Amer J Clin Pathol, 1991; 96:407.

 -Presented at Amer. Soc. Clin Pathologists meeting( 1991)

24. **Choi YJ**, Hu. Y Y, Oh B, Shu J.: High prevalence of cervical neoplasia and Human Papilloma Virus infection in Korea. Lab Invest 1992; 66:62A.

-Presented at the International Academy of Pathology conf., 1992.

25. **Choi YJ,** Moniem H, Markovich B, Cohen B: Direct involvement of HIV in HIV associated nephropathy. Lab Invest 1992; 66: l0lA.

-Presented at the International Academy of Pathology conf,1992.

26. Sagerman P, Niedt G, **Choi YJ,** Hu Y: Detection of Human Papillomavirus 16 in vulva dystrophies. Amer JClin Pathol 1992; 98:357.

-Presented at the International Academy of Pathology conf.,1992.

27. **Choi YJ,** Sehonanda A, Parente 3: Human Papillomavirus and cervical neoplasia in FIIV Infected women. Amer J Clin Pathol 1992; 98:3 57.

-Presented at the Amer Soc of Clin Pathologists meeting,1992.

28. Sehonanda A. **Chol YJ:** Changing patterns of autopsy findings inAIDS: 10 years postmortem study. Lab Invest 1993; 68: 106A.

-Presented at the International Academy of Pathology conf.1993.

29. **Choi YJ, Hu Y,** Atassi B, Sehonanda A: Quantitative markers to monitor clinical state and progression of HIV infection: HIV viral burden, CD4 **+** cells count and P24 antigen expression. 1993; Lab Invest 68: l04A.

-Presented at the International Academy of Pathology conf.(1993)

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2. Choi, Y. Barrett’s esophagus and its associated dysplasia. Accepted for the presentation at the 2015 annual CAP meeting, October 4-7, 2015, Nashville, TN

**V SUPPLEMENT:**

**1.Percent Effort**

 Clinical activities /administration/teaching at Bridgeport Hospital 85%

 Educational activities at Yale Medical School 5%

 Research/Scholarship 10%

 Total 100%

**2. Narrative Description (max 150 words)**

My goal and mission as a pathologist in a clinician-educator track has been service excellence to the customers, patients and physicians and administration. I value providing the best patient care possible today and insuring that patient care will be better in the future. With many years’ experience and broad knowledge in Anatomic and Clinical labs and ample experience in administration as Chair from another hospital, I joined Yale to establish the best quality of pathology and Clinical lab services to the patient care at Bridgeport Hospital (BH). After several years’ struggles and hard work, I was able to achieve trust from the BH administration and developed excellent rapport with the clinicians and established a high quality of patient care in all lab services. I have put forth always my best effort and genuine enthusiasm and hard work as a consultant to the primary care and community physicians and patients. My goal will be to provide the best quality of lab services which are evidence-based and cost-effective for the future patient care, primarily through educational/teaching activities to the clinicians, laboratory personnel and patients in the community.

**3. Clinical Activities**

 A. Narrative Description of Clinical Activities:

 I have been and will be the pathologist of all clinical labs: (1) provide consultations to the primary Care physicians at the community hospital. I ensure (2) on-site availability to respond to any emergent calls and situations by any health care personnel, lab technical person and administrative personnel. Frequently I receive night-calls for the blood bank and the emergent situations. As the Medial Director of the lab services, I need to (3) oversee and supervise lab personnel and testing services to and teach technical personnel and (4) make sure the quality assurance of lab services and lab testing, and (5) compliance to the regulatory guidelines and passing proficiency testing from the various regulatory agencies. In addition, I initiate (6) to introduce new tests, particularly new molecular testing services and the state of art technology /instrumentation. Furthermore, I (7) monitor the costs of lab services, particularly of those esoteric and referencing tests.

 **B. Documentation of Clinical Activities:**

 1.

* Supervise > 80 technical personnel of lab testing
* Sign-out/interpret the lab results
* Annual review of all the manuals of lab testing procedures and policies

 This can take hours of my time but unfortunately their RVU is low. The RVU may not reflect the actual time and percent effort of my responsibilities. Therefore, in many clinical labs, RVU is not used to evaluate the clinical activities of Clinical Pathologist.

 2. Estimated percent of your clinical time/volume in recurring clinical care activities (5 years)

* From 2001 to October 2010, I supervised all lab services of both AP/CP at BH That includes > 2 million lab tests, > 13,000 surgical specimens and 5,000 cytology lab tests.
* After Oct 18, 2012, I assumed the responsibilities of Clinical Lab Director

Supervise > 2.5 million labs testing, and participated interdepartmental conferences.

 3) Evidence of Quality of care measures:

* I reviewed and monitored proficiency testing program from the CAP (> 2000/ year). we achieved a high passing score of 99% in the annual proficiency testing
* I ensured compliance to the regulatory agencies to the JCAHO and Connecticut State DOH.
* Achieved full accreditation from the CAP and CT DOH
* Ensured safety of lab services

 **C. Clinical Program Leadership** 1) Involved in development or administration of clinical programs

* Established the scope of services of all clinical labs and Blood Bank
* Satisfied the required TAT of all lab testing for patient care and at the hospital and met the nationwide bench marks
* Coordinated with the nursing and other health care personnel at BH to ensure proper Point of Care of Testing (POCT) services.
* Validated and introduced new tests for the clinical services and patient care

 2) Development or administration of clinical programs outside of the hospital

As one of the Advisor Board of the American Red Cross in CT, I have participated in changing and updating guidelines for the blood management program

 3). Regional/National Clinical Activities: I have participated in the development of quality matrix for the Korean Independent Physician Practice Group in the New York to comply with the CMS guidelines .

**4. Educational Activities**

1. Narrative Description of Educational Contributions :
* I have taught medical students in renal and immunopathology courses every year.
* I have taught physicians, house staff and other health care personnel at BH through interdepartmental conferences and/or consultations.
1. Documentation of Teaching Activities
* Renal and Immunopathology courses to the 2nd year medical students in each year
* Developed the indicators for transfusion appropriateness at BH and teach physicians and PAs, and other health care personnel at BH
* Taught evidence-based medical practices to the primary physicians, house staff and other health care personnel at the BH
* Taight lab technical personnel for the update and changes in the regulatory guidelines and new technology and instrumentation.

1. Other educational activities: International /regional
* The current trend and update in Laboratory Medicine: Personalized Medicine :

at the Kyung Hee University School of Medicine, October, 2008, Seoul, Korea

* The Past, Present and Future Challenges: Integrated health Care, Lecture given

the 26th annual convention of the ANUCMAA of North America. July 5, 2009,

Dearborn, Michigan

* The Past, Present and Future Challenges: Integrate

health Care, at the Kyung Hee University School of Medicine, Seoul, Korea. March 5, 2010.

1. Mentoring Activities
* Mentored one of junior faculty in the Department of Medicine, 2010 through WIFF
* Faculty mentoring: Dr. Pinto, Assistant Professor of Pathology who is stationed at BH

 Other mentoring activities:

 I mentored medical students and residents and physicians from Korea who are

 visiting Yale campus or the USA

 I mentored Research Associates ( Hadong Kim and Yewhang Cheoung) from

 DongA Pharmaceuticals, Seoul, Korea

**5. Research/Scholarship**

 A. Narrative Description :

1. My research interest during my early career has been mostly in the technical advancement and its application to the clinical lab tests. But I also conducted research projects in clinical samples by applying PCR, ISH and ISH-PCR and IHC on tumor tissues and viral markers in early 1980s. I initiated ACGME approved Immunopathology and Molecular Pathology Fellowship program in 1988, and trained two fellows and conducted various research subjects, published and presented at the scientific meetings such as the annual USCAP.
2. By implementing HIV-viral load testing, I became the Co-investigator in several projects on HIV infection and AIDS funded by CDC or NIH.
3. At BH, as I have monitored QA of Immunohistochemistry (IHC) and validated various antibodies and supervise IHC lab technical personnel, I have applied IHC to my research projects in breast cancers.

1. My area of research or scholarship: **ERβ in Breast Cancers**

The second ER subtype, ERβ was identified in 1996. ERα and ERβ have shown distinct expression pattern, tissue distribution, and promoter-specific actions to estrogens and antiestrogens distinct from ERα. ERβ is widely distributed in a variety of tissues than ERα and has tissue-specific biological actions. It has shown to be involved in antiproliferative action, regulation of apoptosis, modulation of immune responses and an indispensable for maintenance of the proper functions of vital organs. In breast, ERβ has shown to be involved in the terminal differentiation of the normal mammary gland and expressed in normal as well as neoplastic epithelial cells but also in stromal cell distinct from ERα and also in the cytoplasm. ERβ is reduced in breast cancer cells compared to the normal cells, and the decreased ratio of ERβ to ERα and reduction of ERβ was claimed to be the causative factor for breast cancer tumorigenesis.

Up to now, many studies on ERβ have shown controversial and even contradictory results. For the last 5 years, I have tested ERβ by IHC on breast cancers and recently by RT-PCR in breast cancer tissues and breast cancer cell lines.

My preliminary studies showed significant expression of ERβ in ERα- negative and Triple negative breast cancers. This requires additional studies to clarify the significance. ERβ appears to play an important prognostic and predictive marker in breast cancers similar to that of ERα and may become the potential therapeutic targets.

1. Summarize your contributions and provide an estimate of their impact on progress in your major field of interest.

My latest study showed differential expression of ERβ isoform in different molecular types of breast cancers. It appears that testing each isoform is more important than the total ERβ.

 **Choi Y**, Kim H, Kim H. ERβ mRNA expression in ERα-negative and triple

 negative breast cancers. J Clin Oncol 2012; 15 -Supplement, 574

1. Describe your current studies and future directions.
* We have processed in testing agonists and antagonists on ERβ transfected

 breast cancer cell lines

* We are in the process of testing DNA microarray to identify genes involve Future In-vivo study:
* We are going to test ERβ expression in (1) spontaneously developed breast cancers and (2) drug induced breast cancers in rats and mice. The animals will be inoculated with ERβ transfected cells to observe ERβ expression in these tumors.

B. Annotated Samples of Scholarship

**1. ER**β **expression in breast cancers:**

 Our study showed that ERβ may become a key biomarker in breast cancers similar to ERα. ERβ is associated with prognostic biomarkers in breast cancers, such as Her-2/neu and p53 expression. Also our study confirmed that ERβ is expressed not only epithelial cells but also in stromal cells. Its expression is reduced in breast cancers in comparison to normal and benign proliferative lesions. The reduced ERβ may be the cause of breast cancer tumorigenesis.

* **Choi, Y, Pinto**, M**:** Estrogen receptor beta in breast cancer: Hormonal receptors

 and other biomarkers. Applied Immunohistochem Mol Morphol 2005; 13: 19- 24.

* **Choi Y**. Insulin-like growth factors are prognostic factors in breast cancer: Associations with estrogen receptor alpha and beta and apoptotic factors. Modern Pathol 2004; 17:26A.
* **Choi Y**. Estrogen beta expression in myoepithelial and stromal cells in benign and malignant breast tissues. Modern Pathol 2005;18:29A.
* **Choi, Y**. Cytoplasm expression of estrogen receptors in breast cancers. Modern Pathol 2010; 23: 40A.

 **2. ER**β **expression in ERα negative and Triple negative breast cancers**

 Our studies during the last 2 years showed a significant expression of ERβ isoforms ERα negative and Triple negative breast cancers. We are trying to determine its significance and a potential clinical application; we are in the process of testing agonists and antagonists to ERβ in breast cancer cell lines after transfection.

* **Choi Y:** Estrogen negative breast cancer: biology and phenotypic characteristics. Modern Pathol 2006; 19: 23A
* **Choi Y,** Expression of Estrogen receptor beta and its isoforms in breast cancers. Modern Pathol 2009; 22: 33A.
* **Choi Y.** Tissue –specific expression of estrogen receptor-β wild type and its isoforms. Arch Pathol Lab Med 2009; 133:1632.
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C. Summarize your role in collaborative projects within the Medical Center and with other institutions.

**REDS-III study: Recipient Epidemiology and Donor Evaluation Study-III(REDS-III):**

It is a nationwide collaborator study. Yale and American Red Cross in Connecticut and Bridgeport Hospital have become one of the 4 domestic hubs in the USA to receive the contract from NIH to study the safety of recipients and donors for the next 7 years with > 10 million dollar funding. I am one of the Co-investigators on the study. This study is related to epidemiologic survey and/or laboratory survey.

* Donor /donation safety and blood availability,

 Determine the prevalence, incidence and transfusion-transmission risks, emerging agents

* Evaluate blood donor risk factors
* RBC storage and its associated adverse events
* Evaluate donor lab screening/confirmatory testing methodologies and impact on

 transfusion safety

* Evaluate transfusion efficacy or recipients safety:
* Characterize transfusion practices

 **Choi Y**, Krause L. Evidence-based medical practice and the outcomes of education. Modern Pathol 2011; 24:129A

1. **Reflux, Barrett’s esophagus and esophageal cancer ( On-going research)**

About 15-20% of Chronic reflux esophagitis leads to Barrett’s esophagus which eventually can progress to esophageal cancer. The incidence of esophageal has been continuously increasing in recent years and its mortality is extremely high. About >50 of Barrett’s esophagus can progress to various degree of dysplasia. Thus, it is important to detect the earliest change of neoplastic process in Barrett’s esophagus. Recent studies show that the mutation/ deletion of certain tumor suppressor genes or chromosomal changes can provide insight for the potential progression to neoplasia. Protein marker testing by IHC, particularly P53 marker in 100 cases of Barrett’s esophagus with the F/U also showed P 53 to be prognostic and predictive marker for the progression. FISH testing with 4 different probes has shown a promising predictive marker. Thus, the pilot study has conducted by collecting brush cytology and testing FISH molecular testing and compare with histopathology and IHC. The study is in progress to test a large number of Barrett and dysplasia by IHC and molecular markers.