

JOHNS HOPKINS  
ONCOLOGY CENTER

<sup>th</sup>  
*Anniversary*  
25  
*1973-1998*

A C E L E B R A T I O N O F  
T W E N T Y - F I V E Y E A R S



WITHOUT DOUBT, THERE ARE GENIUSES AMONG US - THERE

AT JOHN HOPKINS, BUT, THE SCIENTIFIC ENTERPRISE AT THE END OF THE TWENTIETH

REQUIRES SO MUCH MORE THAN GIFTED INDIVIDUALS WORKING IN

ISOLATION - AND SO, AS WE GATHER THE GREAT POWERS OF THIS INSTITUTION IN WAYS

THAT HAVE NEVER BEFORE BEEN BROUGHT TOGETHER BEFORE, WE BECOME SOMETHING

NEW - STRONGER, WISER, MORE COMPASSIONATE - RISING TO MEET THE COMING CENTURY.

THIS BOOK IS DEDICATED TO THE MEMORY OF OUR COLLEAGUES WHO DEVOTED THEIR CAREERS

TO THE TREATMENT AND RESEARCH OF CANCER AND LOST THEIR OWN LIVES TO THE DISEASE.

FOR THEM, OUR PATIENTS, AND OUR CHILDREN, WE CONTINUE TO FIGHT.

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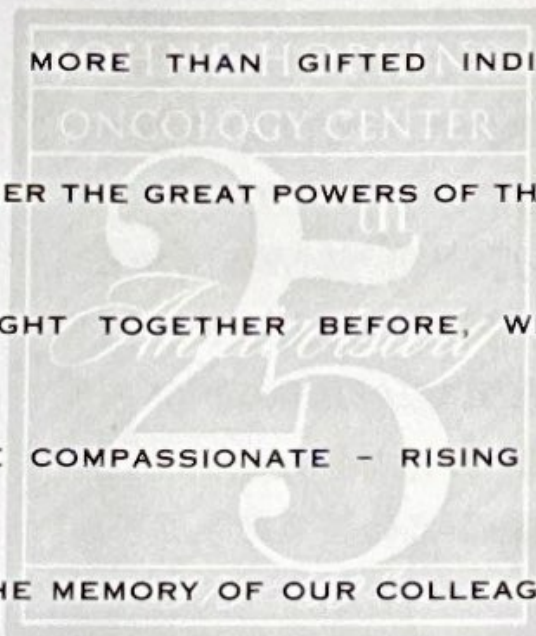
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CENTER DIRECTOR AND ELI KENNERLY  
MARSHALL, JR. PROFESSOR OF ONCOLOGY  
MARTIN ABELOFF, M.D., CONSIDERS THE SUCCESSES



OF THE LAST 25 YEARS THE FOUNDATION OF  
THE EXCELLENT TREATMENT AND RESEARCH  
TAKING PLACE IN THE ONCOLOGY CENTER  
TODAY. "IN 1973, WE HELPED DEFINE THE  
FIELD OF ONCOLOGY. TODAY, WE ARE HELPING TO  
REDEFINE IT," HE SAYS.

“EARLY ON, WE HAD A UNIQUE VISION  
OF WHAT A CANCER CENTER SHOULD BE. ITS  
HALLMARKS WERE COLLABORATIVE SCIENCE AND  
INNOVATION. THAT REMAINS UNCHANGED TODAY. IT  
IS EXCITING TO SEE THE NUMBER OF FACULTY AND  
STAFF THAT HAVE BEEN WITH US THROUGHOUT  
MUCH OF THIS 25-YEAR JOURNEY, AND THOSE WHO  
HAVE JOINED US MORE RECENTLY, IMPRESSED BY

THIS DEDICATION AND COMMITMENT AND THE  
FREEDOM TO EXPLORE NOVEL IDEAS, CONTINUE THE  
VOYAGE WITH US.

“WE ARE LEADERS IN THE NATIONAL  
CANCER PROGRAM. OUR VAST ACCOMPLISHMENTS  
HAVE EARNED US WIDESPREAD PRAISE, BUT THEY  
ALSO BRING US GREAT RESPONSIBILITY. THE REST  
OF THE CANCER WORLD LOOKS TO US FOR DIREC-  
TION,” DR. ABELOFF SAYS. “THERE IS NO QUESTION  
THAT WE HAVE A CHALLENGE BEFORE US. WE HAVE  
NOT ELIMINATED CANCER, SO WE ARE WELL AWARE  
THAT AS FAR AS WE’VE COME, WE STILL HAVE A  
LONG ROAD AHEAD OF US. BUT, THERE ARE GREAT  
OPPORTUNITIES AHEAD. TWENTY-FIVE YEARS AGO,  
WE COULD NOT HAVE ENVISIONED AN OUTPATIENT  
BONE MARROW TRANSPLANT, THERE WAS NO CON-  
CERTED EFFORT IN COUNSELING CANCER PATIENTS,

THERE WAS NO TALK OF GENE THERAPY OR GENETIC  
SCREENING TESTS.”

WHILE THE ADVANCED WORK WE ARE  
DOING TODAY MAKES THE WORK OF 25 YEARS AGO  
LOOK PRIMITIVE, IT, TOO, WILL SEEM PRIMITIVE  
WHEN WE LOOK BACK 25 YEARS FROM NOW.  
“IT IS A CONTINUING, EVER-CHANGING PROCESS,”  
SAYS DR. ABELOFF. “AS COMPLICATED AND COMPLEX  
AS THIS RESEARCH IS, SO PURELY SIMPLE IS ITS  
PURPOSE. IT IS ALL FOR THE PATIENT AND WE  
MUST NEVER LOSE SIGHT OF THAT.” THIS PURPOSE  
HAS REMAINED UNCHANGED OVER 25 YEARS AND  
PROMISES TO HOLD TRUE IN THE FUTURE.

*“Our new clinical and research facilities now under construction symbolize a new era in cancer treatment and research. The task before us cannot be understated. What we have learned in the laboratory over the past 25 years must be translated to prevention, diagnosis and treatment strategies if they are to have a real impact.”*

MARTIN D. ABELOFF, M.D.  
DIRECTOR  
THE JOHNS HOPKINS  
ONCOLOGY CENTER

*“By the late 1970s and early 1980s,  
we began to dissect the genetics of  
cancer by working with DNA,  
RNA and the proteins encoded from  
these nucleic acids.”*

STEPHEN BAYLIN, M.D.  
LUDWIG PROFESSOR  
FOR CANCER RESEARCH  
IN ONCOLOGY

## SOLVING THE MYSTERY OF THE CANCER CELL

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CANCER IS AN INCREDIBLY COMPLEX DISEASE. I DON'T THINK ANYONE REALIZED HOW COMPLICATED IT WAS WHEN WE BEGAN THE EXPLORATION INTO ITS MOLECULAR ORIGINS 25 YEARS AGO," SAYS *STEPHEN BAYLIN, M.D.*, LUDWIG PROFESSOR FOR CANCER RESEARCH IN ONCOLOGY. STILL, HE IS AMAZED AT HOW MUCH WE HAVE LEARNED ABOUT THE CANCER CELL.

THE RESEARCH SUCCESSES OF THE EARLY YEARS — UNDERSTANDING HOW BONE MARROW REGENERATES AND THE DEVELOPMENT OF BONE MARROW TRANSPLANTATION — HAS HAD DIRECT CLINICAL APPLICATIONS. BASIC SCIENCE RESEARCH ON THE BIOLOGY OF THE CANCER CELL ITSELF, HAD ONLY JUST BEGUN.



TODAY, OUR CENTER IS RECOGNIZED AS A PIONEER IN CANCER BIOLOGY AND A PREMIER INSTITUTION FOR THE STUDY OF MOLECULAR GENETICS. OUR STUDIES HAVE SERVED AS THE CLASSIC MODELS FOR DECIPHERING THE MYSTERY OF THE CANCER CELL. IT BEGAN WITH THE IDENTIFICATION OF A SERIES OF GENETIC MUTATIONS AND ALTERATIONS THAT WERE FOUND TO INITIATE AND THEN FACILITATE THE PROGRESSION OF CANCER AS WELL AS NEW MECHANISMS, SUCH AS DNA METHYLATION. THE GREATEST HEADWAY HAS BEEN IN COLON CANCER, WITH GENETIC FINDINGS ALREADY BENEFITING HIGH-RISK FAMILIES THROUGH TESTING AND COUNSELING.

"WE HAVE THE OPPORTUNITY TO DO THINGS IN PREVENTION THAT HAVE NEVER BEEN

TRIED BEFORE," SAYS DR. BAYLIN. IN FACT, THE STUDY OF AGENTS SUCH AS RETINOIC ACID THAT CAUSE PRECANCEROUS CELLS TO GO DORMANT, ARE PROVIDING REAL HOPE THAT CANCER COULD ONE DAY BE A PREVENTABLE DISEASE.

"THE ADVANTAGES OF THIS RESEARCH CANNOT BE UNDERSTATED, BUT WE MUST ALSO BE CAUTIOUS. I THINK IN EVERY ERA IN WHICH CANCER HAS BEEN STUDIED, WE GET TO A POINT WHERE WE THINK, THIS IS IT, WE'VE SOLVED THE MYSTERY. UNEQUIVOCALLY, THE RECENT PHASE OF MOLECULAR STUDY HAS SHED MORE LIGHT ON THE DISEASE THAN ANY RESEARCH BEFORE IT. THIS IS JUST ONE STEP, HOWEVER. MAKING THE TRANSITION FROM UNDERSTANDING THE DISEASE TO ACTUALLY CHANGING THE COURSE OF THIS DISEASE IS THE REAL CHALLENGE," HE SAYS.

## HEALING THE YOUNGEST OF THOSE WITH CANCER

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WENTY-FIVE YEARS AGO, THERE WAS LITTLE OPPORTUNITY TO SAVE THE LIFE OF A CHILD WITH CANCER. NEARLY 70 PERCENT OF CHILDREN DIAGNOSED WITH CANCER DIED FROM THEIR DISEASE. TODAY, THE OPPOSITE IS TRUE — APPROXIMATELY ONE IN EVERY THOUSAND U.S. CITIZENS IS A SURVIVOR OF CHILDHOOD CANCER. BUT, THE LAST DECADE HAS MEANT NOT ONLY GREATER CURE RATES FOR CHILDREN WITH CANCER, BUT A DIFFERENCE IN HOW THEY LIVE.

IN THE 1970s, EVEN THOSE CHILDREN WHO DID SURVIVE TOO OFTEN FELL VICTIM TO THE VERY TREATMENTS THAT SAVED THEIR LIVES, SUFFERING LIFELONG DISABILITIES FROM THE TOXIC THERAPIES THEY RECEIVED. "CURING CHILDREN OF CANCER IS ONLY PART OF A PEDIATRIC ONCOLOGIST'S JOB," SAYS *CINDY SCHWARTZ, M.D.*, WHO DIRECTS THE CENTER'S NOVEL, LONG-TERM

SURVIVORS PROGRAM. SHE IS ONE OF JUST A HANDFUL OF PHYSICIANS AROUND THE COUNTRY WHO SPECIALIZES IN RECOGNIZING, TREATING, AND PREVENTING LONG-TERM MEDICAL PROBLEMS ASSOCIATED WITH CHILDHOOD CANCER THERAPIES. "TODAY, WE CAN'T THINK OF TREATMENTS JUST IN TERMS OF WHETHER THEY MAKE THE DISEASE GO AWAY. WE ALSO MUST CONSIDER HOW THE CHILD WILL DO IN THE LONG RUN AS A RESULT OF TREATMENT. A CURE IS NOT JUST GETTING RID OF DISEASE, BUT MAKING A CHILD REALLY WELL AGAIN," SAYS DR. SCHWARTZ.

THE PEDIATRIC ONCOLOGY DIVISION HAS EVOLVED FROM A FACULTY OF TWO, WITH PATIENTS ALL OVER THE HOSPITAL, TO AN EIGHT-FACULTY TEAM WITH SPECIALIZED NURSES, SOCIAL WORKERS, AND PHYSICIAN ASSISTANTS. IN ADDITION, THERE ARE DEDICATED INPATIENT AND OUTPATIENT UNITS, A FELLOWSHIP PROGRAM TO TRAIN THE NEXT

GENERATION OF PEDIATRIC ONCOLOGISTS, AND A WORLD-RENOWNED PEDIATRIC ONCOLOGY BONE MARROW TRANSPLANT CENTER. PEDIATRIC ONCOLOGY RESEARCHERS HAVE ISOLATED VITAL BLOOD AND MARROW-FORMING STEM CELLS, HELPED TO DECIPHER THE GENETIC PATHWAYS THAT INFLUENCE CANCER, AND TEASED OUT SUBTLE BUT IMPORTANT DIFFERENCES WITHIN KNOWN TYPES OF CHILDHOOD MALIGNANCIES.

"PATIENTS WHO WOULD HAVE BEEN HOSPITALIZED FOR MORE THAN A MONTH CAN NOW "POP" IN TO THE HOSPITAL, AND RECEIVE THEIR TREATMENTS OVER A WEEKEND AND RETURN HOME TO FAMILY, FRIENDS, AND SCHOOL. WE CHERISH OUR CHILDREN AND BELIEVE THAT EVERY CHILD SHOULD HAVE A FULL OPPORTUNITY," SAYS *CURT CIVIN, M.D.*, DIRECTOR OF PEDIATRIC ONCOLOGY AND THE KING FAHD PROFESSOR OF PEDIATRIC ONCOLOGY.





*“Pediatric cancers are different from adult cancers. They do not seem to be the result of carcinogens or years of accumulated mutations, so we may never be able to prevent them. Our goal is to be able to cure 100 percent of the patients who come to us, and our job won’t be done until we do.”*

CURT CIVIN, M.D.  
DIRECTOR, DIVISION OF  
PEDIATRIC ONCOLOGY

*“We have an environment here where nurses have the knowledge and skills necessary to assure excellence in care, and the empathy needed to comfort people with cancer and their families.”*

CONNIE ZIEGFELD, R.N., M.S.  
ASSISTANT DIRECTOR OF  
ONCOLOGY NURSING

## THE HIGHEST LEVEL OF NURSING CARE

**M**ANY THINGS HAVE CHANGED IN CANCER CARE AT JOHNS HOPKINS DURING THE LAST 25 YEARS, BUT ONE THING THAT HAS REMAINED A CONSTANT IS THE HIGH LEVEL OF NURSING CARE PROVIDED TO ONCOLOGY PATIENTS. IT IS A MODEL FOR THE REST OF THE NATION, WITH NURSES AND NURSING STUDENTS FREQUENTLY TRAVELING TO OUR



CENTER TO OBSERVE AND TRAIN WITH OUR EXCEPTIONAL STAFF. THE FIRST NURSING UNIT AT HOPKINS TO RECRUIT A PSYCHIATRIC LIAISON NURSE AND NURSE RESEARCHER WAS IN THE ONCOLOGY CENTER. "THIS WAS VIRTUALLY UNHEARD OF AT THE TIME," RECALLS *CONNIE ZIEGFELD, R.N., M.S.*, ASSISTANT DIRECTOR OF ONCOLOGY NURSING. "KNOWLEDGE AND TECHNIQUES OF ONCOLOGY NURSING HAVE BEEN REFINED AND FOCUSED IN THE 23 YEARS I HAVE BEEN

A NURSE." THE CENTER'S NURSING EXCELLENCE IS THE LEGACY OF LINDA ARENTH, THE CENTER'S FIRST DIRECTOR OF NURSING, WHO SADLY DIED OF BREAST CANCER IN 1992. "LINDA, LIKE MANY OF THE ONCOLOGY CENTER'S ORIGINAL CLINICIANS, HAD A FORWARD-THINKING VISION," SAYS CURRENT ONCOLOGY NURSING DIRECTOR *SHARON KRUMM, Ph.D.*

THE INPATIENT/OUTPATIENT (IPOP) BONE MARROW TRANSPLANTATION PROGRAM IS ONE OF THE CENTER'S MOST INNOVATIVE CLINICAL ENDEAVORS OF RECENT YEARS. MOVING ONE OF ONCOLOGY'S MOST INTENSIVE THERAPIES TO A LARGELY OUTPATIENT PROCEDURE, IPOP WAS CO-DEVELOPED AND IS PRIMARILY MANAGED BY NURSES. "WE REALIZED EARLY ON THAT WE MUST ALWAYS BE THINKING ABOUT HOW WE CAN MAKE CANCER THERAPY MORE TOLERABLE FOR PATIENTS

AND MORE COST-EFFECTIVE," SAYS ZIEGFELD.

SHE CONSIDERS THE INCLUSION OF SOCIAL WORK, COUNSELING, AND OTHER PATIENT AND FAMILY SERVICES INTO THE TREATMENT PLAN TO BE AMONG THE MOST SIGNIFICANT IMPROVEMENTS IN PATIENT CARE DURING THE LAST 25 YEARS.

"ONE OF THE MOST EXCITING THINGS FOR ME TODAY, AND I OFTEN TELL THIS TO YOUNG NURSES JUST BEGINNING THEIR CAREERS, IS THAT I HAVE WITNESSED THE FRUITS OF OUR EARLIER WORK. I REMEMBER CLEARLY WHEN HODGKIN'S DISEASE AND TESTICULAR CANCER WERE OFTEN FATAL DISEASES. NOW, THESE DISEASES ARE OFTEN CURABLE. I ENVISION THE DAY WHEN THE SAME WILL BE TRUE FOR OTHER TYPES OF CANCERS, AND I KNOW OUR NURSES WILL BE AN IMPORTANT PART OF THAT PROGRESSION," SAYS ZIEGFELD.

## CARING AND CURING

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HEN I JOINED THE ONCOLOGY TEAM IN 1975, THERE WERE NO FAX MACHINES AND NO COMPUTERS. TODAY, WE PRACTICE TELEMEDI-



CINE, REVIEWING PATIENT X-RAYS AND CAT SCANS SENT TO US VIA SOPHISTICATED COMPUTER CONNec-

TIONS FROM AS FAR AWAY AS SINGAPORE," SAYS DAVID ETTINGER, M.D., ASSOCIATE DIRECTOR FOR CLINICAL AFFAIRS AND PROFESSOR OF ONCOLOGY.

MANY FOUND IT LAUGHABLE WHEN, IN THE EARLY YEARS, HE OBTAINED A GRANT FROM THE NATIONAL CANCER INSTITUTE FOR PHASE 1 TRIALS OF NEW DRUGS. YET THESE TRIALS LED TO TWO OF THE MOST PROMISING NEW ANTICANCER AGENTS — PACLITAXEL AND TOPOTECAN. THE DISCUSSION OF GENE THERAPY TRIALS WAS MET WITH A SIMILAR LACK OF ENTHUSIASM. "NO ONE THOUGHT IT WOULD

WORK, AND THERE ARE SOME WHO STILL DON'T. BUT, WE HAVE HAD PROMISING RESULTS WITH OUR TRIALS AND HAVE BEEN THE RECIPIENTS OF HIGH PRAISE," SAYS DR. ETTINGER.

"THAT IS WHAT IS SO SPECIAL ABOUT THE ONCOLOGY CENTER AT HOPKINS. THERE IS ALWAYS SUPPORT AND ENCOURAGEMENT TO BE INNOVATIVE. THAT IS WHY WE ATTRACT SO MANY GIFTED CLINICIANS AND RESEARCHERS AND WHY SO MANY OF THEM HAVE MADE THEIR CAREERS HERE," HE SAYS. "WE SAY IT SO MUCH THAT I THINK WE TAKE IT FOR GRANTED, BUT THIS TRULY IS AN AMAZING PLACE OF HEALING AND DISCOVERY.

"WE ARE THE ONLY CANCER CENTER IN THE COUNTRY WITH THREE SPORE (SPECIALIZED PROGRAMS OF RESEARCH EXCELLENCE) GRANTS. FOR FIVE CONSECUTIVE YEARS, *U.S. NEWS & WORLD REPORT*

HAS RANKED THE JOHNS HOPKINS HOSPITAL AS THE LEADING HOSPITAL IN THE COUNTRY AND OUR ONCOLOGY CENTER AMONG THE TOP FIVE IN THE NATION. AS A MEMBER OF THE NATIONAL COMPREHENSIVE CANCER NETWORK, WE HELP SET THE STANDARDS OF CANCER CARE FOR THE ENTIRE COUNTRY," HE SAYS.

TRANSLATIONAL RESEARCH, WHERE LABORATORY DISCOVERIES ARE QUICKLY TRANSFERRED TO THE BEDSIDE, IS A HALLMARK OF ONCOLOGY AT JOHNS HOPKINS. "WHEN OUR EXISTING CENTER WAS CONSTRUCTED IN 1977 WITH PATIENT UNITS AND LABORATORIES ADJACENT TO ONE ANOTHER, IT WAS CONSIDERED A NOVEL APPROACH. HOWEVER, IT ENSURED THAT OUR RESEARCHERS WOULD WORK IN COLLABORATION," HE SAYS.

*“When our first patients came here, they did not want their family and friends to know they had cancer. Today, our patients are very knowledgeable about their disease and are active participants in their care.”*

DAVID ETTINGER, M.D.  
ASSOCIATE DIRECTOR FOR  
CLINICAL AFFAIRS AND  
PROFESSOR OF ONCOLOGY

“WE HAVE NEVER LOST SIGHT OF THE PURPOSE OF OUR WORK. IT HAS NEVER BEEN TO ADVANCE OUR COLLECTIVE OR INDIVIDUAL REPUTATIONS, BUT ALWAYS FOR THE BENEFIT OF THE PATIENT. YOU CANNOT DO THAT IN ISOLATION,” HE SAYS.

AS MONUMENTAL AS THE THERAPEUTIC SUCCESSES HAVE BEEN, SO TOO ARE THE SOCIAL ADVANCES. “I REMEMBER WHEN CANCER WAS CONSIDERED A SOCIAL DISGRACE. PEOPLE DIDN’T TALK ABOUT IT. THE WORD WAS TABOO. WHEN OUR FIRST PATIENTS CAME HERE, THEY DID NOT WANT THEIR FAMILY AND FRIENDS TO KNOW THEY HAD CANCER.

“TODAY, OUR PATIENTS AND THEIR FAMILIES ARE VERY KNOWLEDGEABLE ABOUT THE DISEASE. THEY CHALLENGE US IN REGARD TO THEIR THERAPEUTIC OPTIONS AND ARE ACTIVE PARTICIPANTS IN THEIR CARE,” DR. ETTINGER SAYS.

“WHEN I FIRST CAME TO HOPKINS, THERE WAS NO CANCER COUNSELING CENTER, PATIENT AND FAMILY SERVICES, HOME CARE, OR HOSPICE. WE NOW TREAT THE WHOLE PATIENT, NOT JUST THE DISEASE. THESE IMPROVEMENTS ARE AS SIGNIFICANT AS THE ADVANCES IN THERAPY,” HE SAYS.

“IN 1973, THERE WAS NO SUCH THING AS COMBINED MODALITY THERAPY. TODAY, IT IS A STAPLE OF CANCER TREATMENT, AND IN A YEAR WE WILL MOVE INTO A NEW CLINICAL BUILDING WHERE WE WILL MERGE MEDICAL, SURGICAL, AND RADIATION ONCOLOGY.

“WE HAVE ALWAYS BEEN A LEADING CANCER RESEARCH AND TREATMENT FACILITY,” SAYS DR. ETTINGER. “BUT TODAY, WE TRULY ARE A COMPREHENSIVE CANCER CENTER.”

“P  
RIOR TO THE 1960s, ONCOLOGY AS A FIELD OF STUDY OR CLINICAL SPECIALTY  
WAS NOT REPRESENTED IN THE VAST MAJORITY OF ACADEMIC MEDICAL CENTERS. IN MOST HOSPITALS,



INCLUDING JOHNS HOPKINS, PATIENTS WERE CARED FOR BY A WIDE VARIETY OF CLINICIANS –  
VERY FEW WITH A SPECIAL INTEREST OR COMPETENCE IN ONCOLOGY. ♣ THE MEANS OF  
EFFECTING THE COURSE OF THIS RELENTLESS DISEASE WERE VERY LIMITED, AND MOST

PATIENTS PRESENTED WITH ADVANCED DISEASE. IT WAS DURING THE 1960'S THAT A HANDFUL OF US  
ESPOUSED A DIFFERENT VISION. ♣ TODAY, WE HAVE MUCH OF WHICH TO BE PROUD. MANY OF OUR  
FACULTY ARE ACADEMIC LEADERS IN THEIR FIELD; OUR NURSES HAVE BEEN LEADERS IN THE  
DEVELOPMENT OF ONCOLOGY NURSING AS A RECOGNIZED CLINICAL SPECIALTY; AND OUR PATIENT AND  
FAMILY SERVICES HAVE EARNED WIDE RECOGNITION. AS GLOWING AS OUR PAST HAS BEEN, HOWEVER,

IT IS CERTAIN TO BE A PALE REPRESENTATION OF WHAT IS TO COME.”

ALBERT H. OWENS, JR., M.D.

HOSPITAL TRUSTEE, DISTINGUISHED SERVICE

PROFESSOR OF ONCOLOGY AND MEDICINE,

DIRECTOR EMERITUS – THE JOHNS HOPKINS ONCOLOGY CENTER