José “Pepe” Baselga, MD, PhD: In Memoriam (1959–2021)

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On March 21, 2021, a guiding light in cancer research and clinical oncology and valiant transformer of patient treatment and care was extinguished. José Baselga’s untimely passing has sent shockwaves through the global cancer research community. We have lost a true giant—a visionary leader in translational science and precision oncology and one who also transformed institutions and professional societies everywhere he went.

As we reflect on some of José’s many remarkable achievements as well as the many qualities that made him the unique individual he was, we hope to do him justice. This is the first obituary published in Cancer Discovery, a journal for which he served as a founding Editor-in-Chief along with Editor-in-Chief Lewis C. Cantley. The irony is bittersweet: José was an undisputed man of “firsts” whom we all followed, trying to keep up with his trailblazing pace, frightening brilliance, and steadfast determination to improve outcomes for patients with cancer everywhere.

José Baselga was born on July 3, 1959, in Barcelona, Spain, with the pursuit of excellence in health care quite literally in his blood. His mother was a nurse, and both his father and grandfather were physicians. “Medicine runs in our family like an autosomal dominant trait,” said his youngest sister Eulalia, herself a pediatric dermatologist at the San Joan de Deu Hospital in Barcelona, during a recent tribute for her late brother. Like his younger sister, José was destined to be a devoted physician and healer who spent his life caring for patients with cancer. During his outstanding 27-year career, José succeeded in creating an environment in which optimal patient care was tightly integrated with innovative translational and clinical cancer research that have echoed internationally in the battle against cancer.

Even during his early days as a resident in Internal Medicine at Vall d’Hebron University Hospital in Barcelona, José displayed signs of the visionary leader he would later become. His passion and dedication to unmasking the basic mechanisms of cancer and improving patient care drove him to challenge the way research was conducted.

Spurred by his father’s encouragement to travel in order to fulfill his aspirations to become a transformative figure in oncology, he left Spain for the United States to join the Memorial Sloan Kettering Cancer Center (MSKCC) in New York, NY. There, he completed his oncology training under the mentorship of John Mendelsohn and Larry Norton in the laboratory and clinic, respectively. As early as 1991, José had begun to carve out a new paradigm for cancer research. In conducting related clinical and laboratory research in parallel, José would embody what later became known as “translational” research many years before the term was coined and popularized. During his almost six-year tenure at MSKCC, José conducted preclinical studies in parallel to leading a clinical trial to test the potential therapeutic effects of the first anti-HER2 monoclonal antibody that would later be known as trastuzumab. As is now universally known, the efficacy of this molecule in treating patients with breast cancer overexpressing HER2 exceeded all expectations (except José’s) and transformed the natural history of this disease. Thousands of patients’ lives have been saved, thanks to these innovations José pioneered during his oncology fellowship.

Returning to the Vall d’Hebron Hospital in 1996 to lead its then very small Oncology Department, José’s vision, work ethic, and commitment to accelerate better treatment options for patients quickly lifted the department to new heights, eventually reaching the top echelon of international cancer centers. José created an environment in which optimal patient care was tightly integrated with innovative translational research, all in the context of a Public Health System—an exemplary model that has been adopted and adapted across borders.

José hated wasting time. He applied his sense of determined urgency to everything he did. He made the impossible seem easy. His colleagues looked at him in astonishment when he matter-of-factly declared that his oncology program would occupy two entire floors at Vall d’Hebron. In spite of a traditionally rigid environment, José succeeded in creating an Oncology Department to incorporate the best cancer care with a translational-clinical research program, uniting all professionals involved in cancer care. This embodied José to create the Vall d’Hebron Institute of Oncology (VHIO), which has since become a comprehensive cancer center of international acclaim. José was therefore able to turn his unique vision into a reality. Aided by direct access to patients and his multidisciplinary translational model, VHIO rapidly became one of the few cancer research institutes to translate research findings for the benefit of patients in record time.

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Cancer Discov 2021;11:1614–6
doi: 10.1158/2159-8290.CD-21-0458
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Seeking out new challenges, José crossed the pond once again to join the Massachusetts General Hospital Cancer Center in Boston as Chief of the Division of Hematology and Oncology in 2010. Although initially intending a longer tenure in Boston, José could not pass up the unexpected opportunity to return to MSKCC in 2013 as its Physician-in-Chief and subsequently its Chief Medical Officer. In his perch atop MSKCC’s leadership, José further elevated MSKCC’s already formidable international prestige. In addition to creating a fully integrated program in precision medicine, he also founded the Center for Molecular Oncology and Early Drug Development service, and broke new ground by setting up a comprehensive molecular profiling program, accessible to all patients at MSKCC.

Throughout his career, José was a change-maker in the development of molecular targeted agents, with special emphasis on breast cancer. He directed several preclinical and early clinical studies that contributed to the development of agents against the epidermal growth factor receptor (EGFR) as well as the HER2 receptor and the PI3K pathway, among others. These therapies would become global standards of care for patients with cancer worldwide. One early and notable example was José’s contributions to developing the first EGFR-targeted therapies. Initially working on what would become the precursor to cetuximab in the Mendelsohn laboratory during his fellowship, José would go on to help lead the clinical development of cetuximab, the first EGFR-targeted monoclonal antibody for the treatment of colorectal and head and neck cancers. In pursuing this line of scientific and clinical inquiry, José had again bucked conventional wisdom that this approach would not succeed, and in doing so would significantly improve outcomes for patients with these refractory cancers.

Although molecular-based therapies have provided substantial clinical benefit for patients with cancer, their effectiveness is often limited by either primary or acquired resistance. José and collaborators identified novel treatment combinations, demonstrating that incorporation of a second anti-HER2 monoclonal antibody, pertuzumab, with a unique binding mode into trastuzumab-based regimens could further prolong benefit and delay or reverse drug resistance. José would later demonstrate that this combination would significantly improve outcomes for patients with HER2-positive breast cancer. These clinical trials represent some of the most groundbreaking studies in the history of HER2-positive breast cancer.

In addition to his contributions to the development of trastuzumab, pertuzumab, and cetuximab, José was involved in the development of at least a dozen approved cancer drugs and precision therapies. These include everolimus, trastuzumab emtansine, lapatinib, gefitinib, erlotinib, neratinib, olaparib, alpelisib, and, most recently, trastuzumab deruxtecan.

José’s final leadership position would be one that he pursued with equal vigor, zeal, and driving spirit until almost his final days. After resigning from MSKCC in 2018, José soon embraced a new challenge, serving as AstraZeneca’s Executive Vice President of Oncology Research and Development and Member of its Senior Executive Committee. In typical whirlwind style, José immediately set about innovating. He set the company’s Oncology Research and Development function on a new path and spearheaded the acceleration of therapeutic development and implemented new directions to advance research into epigenetics, antibody–drug conjugates, cell-based therapies, and other novel anticancer medicines.

In what would turn out to be a final example of his incomparable ability to forge powerful partnerships by bringing the right people together at the right time, José was instrumental in establishing a collaboration between AstraZeneca and Daiichi Sankyo, which led to the recent US and EU approval of the antibody–drug conjugates trastuzumab deruxtecan and datopotamab deruxtecan as novel precision therapies. Trastuzumab deruxtecan has since received global approvals for HER2-positive breast and gastric cancers, with multiple additional indications anticipated in the coming years. Always steps ahead, we keenly await the results of José’s ongoing projects as well as those that were surely being planned. Some of these will certainly center on his quest to combat resistance to cancer therapies and apply real-world evidence and digital technologies to innovative clinical trial design.

In addition to his numerous achievements and seminal contributions to oncology research, José was a truly charismatic character with limitless generosity, especially for his beloved patients. Above and beyond his role as a gifted physician, he sought to ease his patients’ fears and preoccupations by gently advocating aliveness. He was an amazing human being with tremendous heart.

Across Europe, North America, and beyond, patients, mentees, colleagues, and professional societies continuously sought his counsel and collaboration. José always responded to these requests with equal measures of motivation, dedication, and heart. José was a devoted mentor; he helped to build the careers of countless young talents who showed the same levels of ambition, dedication, and tenacity that he expected from himself. We were three of his disciples, and, like many who followed, are hugely indebted to him.

He was also a man of intensity who dismissed mediocrity point blank. He sought answers and did not always take kindly to those who answered his questions by posing one of their own. In his storm, he took down trees and did not make excuses for this behavior. While he could be very demanding of his colleagues, we all appreciated and benefited enormously by being held to such high standards. José helped to build the careers of a generation of oncologists and physicians. He inspired his mentees through his own indomitable spirit and drove each of them to move forward and subsequently continue to achieve the very best of themselves. José had an unmatched gift to push his mentees to the limits of their own intelligence and medical and scientific intuition.

Throughout his career, many consortia of excellence and scientific societies rightly sought—and counted on—his scientific expertise, top-draw talent, and leadership. Concerning the latter, he was a long-time volunteer of the American Society of Clinical Oncology (ASCO) and served on its Board of Directors (2003–2006), Annual Meeting Scientific Program Committee (which he chaired in 2001), and Special Awards Selection Committee, among other roles.

José also served as President of the European Society for Medical Oncology (ESMO; 2008–2009), and the American Association
for Cancer Research (AACR; 2015–2016). He transformed both by making fundamental changes and adding innovative programs, mainly focused on better supporting, nurturing, and guiding future generations of thought leaders within the oncology field, and more rapidly evolving translational cancer science and clinical oncology. “All of us at AACR are deeply saddened by the loss of José, our dear colleague and friend. His death is a profound loss to the entire national and international cancer research community. He was a major force at AACR. Under his visionary leadership as President, AACR had a year of tremendous growth in innovative programs and initiatives. He also played a leading role in strategically laying the foundation of our future scientific programs. He was a great communicator with an extraordinary intellect, and he consistently inspired us at AACR with his characteristic work ethic, his passion for helping cancer patients, and his tremendous kindness,” said Margaret Foti, AACR’s Chief Executive Officer.

Above all, José was devoted to his adored wife Silvia, and much loved as “Papi” to his four children, Marc, Clara, Pepe, and Alex. José’s passing represents an unfillable void to his family, loved ones, and friends.

He will continue to inspire present and future generations of cancer researchers and clinical investigators around the globe. It now falls on our shoulders, as a community, to collectively build on his incredible legacy, one which will live on for decades to come.

José Baselga, you remain unforgettable in every way.

Authors’ Disclosures

J. Tabernero reports personal fees from Array Biopharma, AstraZeneca, Avivity, Bayer, Boehringer Ingelheim, Chugai, Daiichi Sankyo, F. Hoffmann-La Roche Ltd, Genentech Inc, HalioDX SAS, Hutchison MediPharma International, Ikena Oncology, IQVIA, Lilly, Menarini, Merck Serono, Merus, MSD, Mirati, Neophore, Novartis, Orion Biotechnology, Peptomyc, Pfizer, Pierre Fabre, Samsung Bioepis, Sanofi, Seattle Genetics, Servier, Taiho, Tessa Therapeutics and TheraMyc and personal fees from Imedex, Medscape Education, MJH Life Sciences, PeerView Institute for Medical Education and Physicians Education Resource (PER) outside the submitted work. D.M. Hyman reports personal fees from Lilly/Loxo Oncology outside the submitted work. J.-C. Soria reports other support from AstraZeneca, Hookipa Pharmaceutical, Relay Therapeutics, and Gritstone Oncology during the conduct of the submitted work.

Acknowledgment

We are grateful to Amanda Wren (VHIO) for her contribution to compiling this tribute.
CANCER DISCOVERY

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Cancer Discov 2021;11:1614-1616. Published OnlineFirst April 21, 2021.

Updated version
Access the most recent version of this article at:
doi:10.1158/2159-8290.CD-21-0458

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