## LEADERS IN VENOUS SURGERY

## Robert Linton Kistner (1929)

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"His work sparked the birth and growth of an entire major branch of vascular disease."
—President Michel S. Makaroun

Robert Linton Kistner was born in 1929 in St. Louis, Missouri. His father was a physician. He received his medical education and general surgical training at St. Louis University. After military service (Travis AFB), he completed the peripheral vascular fellowship at Cleveland clinic (A.W. Humphries). He joined The Straub Clinic, Hawaii, starting a vascular practice focusing on venous disease. He was attracted to then heretical views of Gunnar Bauer on the causation of reflux. The direct repair philosophy he had imbibed at Cleveland Clinic led him to perform the first recorded open femoral valvuloplasty in 1968 on a 57-year-old man with severe reflux. He reported a series of 17 such successful repairs at the 1974 Vascular Annual Meeting in Boston.<sup>2</sup> Audience reception was excitement at the new frontier mixed with skepticism. Open venous surgery was off limits at the time from perceived prohibitive risk of thromboembolism. The Vietnam War Registry would soon validate the safety of open venous repairs.

Kistner described several other reconstructive techniques, such as segment transfer, external valvuloplasty, and endophlebectomy. Aided by several young colleagues (notably Elna Masuda and Fedor Lurie), he standardized the technique of duplex ultrasound reflux assessment and graded its severity (Kistner grading). Bo Eklof, a venous pioneer in his own right (venous thrombectomy), joined Kistner later in his career. A major achievement of their collaboration was the Clinical, Etiology, Anatomy, and Pathophysiology (CEAP) classification with Venous Clinical Severity Score grading, developed with input from several experts. It provides a common framework for a diverse disease and has been quickly adopted worldwide. Venous literature, although voluminous, was anecdotal with dubious evidentiary

value. Quality publications have increased exponentially since.

The American Venous Forum (Kistner among the founders) disseminated emerging venous concepts. Post-thrombotic syndrome, notably absent in nonsurgical literature before, is widely recognized now. The Straub team organized a series of legendary Pacific Vascular Symposia (1-7) that drew large international audiences.

Kistner's works had a pivotal role in the development of venous vascular surgery as a distinct specialty. More broadly, the emerging specialty had a catalytic impact on the entire field of venous disease—spawning new techniques and devices, advancing venous diagnostics, and stimulating basic and clinical research.

Kistner is an unassuming man of amiable personality. He will explain venous concepts to experts and novices alike without any hint of condescension. He has

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continued his work through ailments, some of them painful, with an indomitable spirit. He officially "retired" last year to spend time with Adelaide, his wife of 65 years, and family (two daughters) at his beautiful home overlooking the Pacific. Yet, venous disease is a lifelong quest. He is currently working on a new classification of reflux.

The Society for Vascular Surgery honored Kistner at the 2019 meeting with the infrequently awarded Medal of Innovation (the last one in 2013). History will credit Robert Linton Kistner for laying the scientific foundations of modern venous surgery and moving its practice from the backwaters to the mainstream of vascular surgery.

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