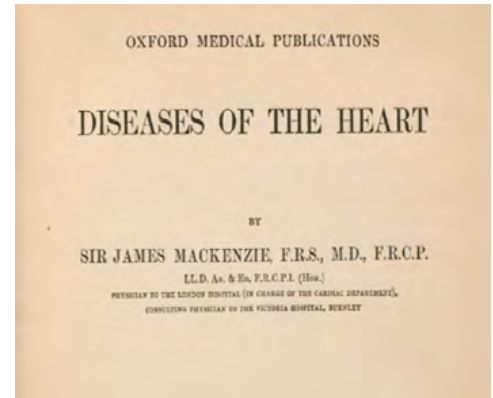
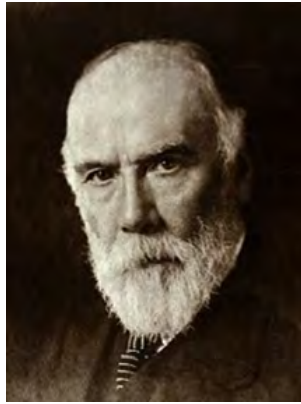


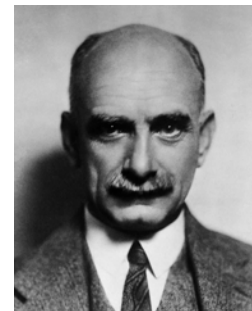
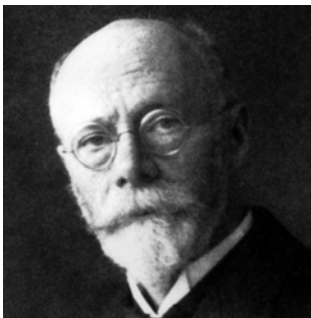
# Cardiology Origins

In October of 1908, the **Chicago Cubs** won the **World Series**. As it turns out, the Cubs had won the previous year as well. Meanwhile, in London, a Scottish physician, James MacKenzie, who had published *The Study of the Pulse* in 1902, was completing the primal text of cardiovascular medicine, *Diseases of the Heart* (1908). The medical specialty of cardiology had been born.



At the same time, just across the English Channel, in Leiden, Willem Einthoven was pioneering development of the electrocardiogram. A London physician, Thomas Lewis, worked with Einthoven, and his contributions were recognized when Einthoven was later awarded the Nobel Prize in Physiology or Medicine "for his discovery of the mechanism of the electrocardiogram". From the [Nobel award ceremony speech](#): " *Sir Thomas Lewis was the first who realized the importance of Einthoven's discovery and who followed his line of thought. His elegant demonstration of the QRS-complex in the electrocardiogram by means of an algebraic summation of dextro- and laevogram confirmed the correctness of Einthoven's interpretation.*"

Lewis's first book, *Mechanism and registration of the heartbeat* was published in 1909.



An American physician, Paul Dudley White, was an internal medicine resident at Massachusetts General Hospital (**MGH**) when he received a Harvard Travelling Fellowship, allowing him to travel to London in October 1913 to study electrocardiography and cardiac physiology with Thomas Lewis. During his stay, he visited the cardiac clinics of Dr. James MacKenzie and Dr. John Parkinson, studying cardiac arrhythmias. His plans were for a longer stay, but the summer of 1914 saw the beginning of four years of war in Europe and beyond (see: *\*wwi\**). Dr. White returned to Boston in July 1914, continuing his work at **MGH**, establishing its first electrocardiography lab. The war in Europe later interrupted his work again, as he spent over two years in the armed forces, returning home in August 1919.

In 1920, Paul White organized a cardiology training program at **MGH** for students, house staff, fellows, and graduate students. In addition, trainees from all over the U.S. and, indeed, from all over the world, came to study cardiovascular disease with Dr. White. While the duration of cardiology training was not always as long nor nearly as regimented as the many years required in today's programs, those who visited to study with Dr. White were learning from a master in the science and art of caring for patients with cardiovascular disease.

The cardiology training program of Paul Dudley White was well established at **MGH** by the time Dr. John Barton Burrett earned his M.D. in 1937 at **New York Medical College and Flower Hospital** in Manhattan, where his father, Dr. Claude A. Burrett, was dean. The following year, Dr. Burrett married Clara Bray, of Orlando, Florida, with family roots in Georgia. The newlyweds planned a visit to Florida and Cuba after their marriage, according to the July 3, 1938 announcement in the *New York Times*. The next year, the world was again in the throes of war in Europe, and this time also in Asia. During his time in the military, Dr. Burrett met an Alabama surgeon, Dr. Joseph Donald, who gave him the idea to move to Birmingham to practice medicine, after he had completed his medical training.



While working at **MGH** with Dr. White, Dr. Burrett learned much of what there was to know about the diagnosis of cardiovascular disease and best treatment to be offered to patients suffering with cardiac problems.



When the work that Dr. Burrett and Dr. White had done together was written up and published, the year was 1945. The article, “Large Interauricular Septal Defect with Particular Reference to Diagnosis and Longevity”, which the two men co-authored, was published in the ***American Journal of Medical Science*** in **March, 1945**.\* Its title gives a hint to the state of the art of cardiovascular intervention at the time. Surgical correction of congenital cardiac issues was literally in its infancy.\*\*



Following his time in Boston with Paul Dudley White, Dr. John Burrett came to **Birmingham**, joining the faculty of the newly relocated **University of Alabama School of Medicine**. Dr. Burrett established **Cardiovascular Associates**, with its first office on Southside, in 1946, adding associates to his group, and establishing the first cardiology group in the state of Alabama.

The rest, as they say, is history.

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\* As an historical tangent, this writer's father, Phillip J. Boogaerts, USMC, celebrated his 19th birthday that same month – March 1945 – as he left Iwo Jima with other Marines who had survived (see: [\\*wwii\\*](#)). One month earlier, on Mardi Gras day, six-year-old **Andreas Gruentzig** - who was to become a father of modern cardiology by inventing coronary angioplasty - was hiding with his mom in the basement of their Dresden home, while British and American bombers created a firestorm above them (see [here](#)).

\*\* On November 29, 1944, at Johns Hopkins, **Dr. Helen Taussig** and **Dr. Alfred Blalock** decided to proceed with a pioneering procedure to surgically correct tetralogy of Fallot in a small child. Blalock was assisted in the OR by **Vivien Thomas**, a virtuoso surgical assistant, who worked with Blalock in the Hopkins surgical labs and who had developed many of the operative techniques that were used (see: [\\*pump\\*](#)).