George Nicholas Papanicolaou, Father of Modern Cytopathology

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George Nicholas Papanicolaou was an embodiment of that indomitable human spirit which surmounts National and linguistic barriers, overcomes biases and prejudices to emerge victorious. Born to a physician father on May 13, 1883, at Kyme Greece, he received MD from University of Athens in 1904 and served as an assistant surgeon in the military until 1906. He went to Germany in 1907 and earned a PhD in zoology from University of Munich in 1910. Returning to Greece, he met and married Andromachque Mavroyeni, later known as Mrs Mary Pap, who became a pillar of support for him. Prospects of better opportunities brought the couple to US on Oct 19, 1913 with just enough money for their visas and with no knowledge of English. His first job in the US was as a rug salesman. His hardships eased slightly, when he became assistant in Pathology Department of New York Hospital and later in 1914 as assistant in Anatomy at Cornell Medical School, where he kept working till few months before death. His wife Mary also worked there as his technician.

It was at Cornell where Dr. Papanicolaou worked examining vaginal smears of guinea pigs to determine the existence of a menstrual cycle in them. In 1920, he started studies on human vaginal cells. He observed cancer cells in vaginal smears and realised great potential of this simple test in early diagnosis of cancer of cervix. He noted "The first observation of cancer cells in a smear of uterine cervix was one of the most thrilling experiences of my scientific career." Medical world at that time was fascinated by gross anatomical specimens and was not ready for study of cells. He introduced this low cost screening test for early detection of cancer at a medical conference in Michigan in 1928, which met skepticism and resistance from medical community. In 1939, the reevaluation of the vaginal smear for cancer detection began. Diagnostic potential of vaginal smear in early detection of cervical cancer was validated by scientific studies. This culminated in publication of famous monograph titled "Diagnosis of Uterine Cancer by Vaginal Smears" in 1943 by Dr Papanicolaou and Dr Herbert Traut. This revolutionary diagnostic test was named Pap smear which has saved lives of millions of women by early diagnosis of cancer of cervix, which still remains one of the commonest cancers of females in many developing countries. He published "Atlas of Exfoliative Cytology" in 1954. An indefatigable worker, he is said never to have taken a vacation.

He died on February 18, 1962 of heart failure and was buried in New Jersey. This great cytopathologist was honoured by USA in 1978 and by Greece in 1973 and 1978 by releasing commemorative stamps.