But they indicate that oral contraceptives, along with sexual relationships early in life, sexual promiscuity and pregnancy, may heighten the risks of uterine cancer. The NIH is now launching a study of 30,000 women in 10 regions to sort out these risks.

Even more muddling is mounting evidence that oral contraceptives may prevent breast and uterine cancer. At a meeting last week in Washington of the International Confederation of Midwives, R. T. Ravenholt of the Agency for International Development described some of this evidence. In the United States, where oral contraceptives were first introduced and used in large measures, mortality rates for cancer of the uterus have decreased rapidly and progressively during the first decade of pill use, especially among younger women. Several clinical-epidemiological studies show women with breast tumors, both benign and malignant, to have had less prior experience with oral contraceptives than matched control patients without such disease. One of the largest and most recent of these studies is reported by Martin P. Vessey and Richard Doll of Oxford University, England, in the Sept. 23 BRITISH MEDICAL JOURNAL.

Obviously even a "miracle drug" like the birth control pill would be hard put to both cause *and* prevent breast and cervical cancer in women. Douglas Janss of the National Cancer Institute says the situation is not as hopeless as it seems. One problem, he says, is that investigators have used different animal models with different sensitivities to cancer, which may or may not approximate human sensitivity to cancer. Another is that they have used closely related hormones, like the estrogen class, with subtle, yet divergent biochemical specificities in target tissue. And the studies have used diverse, not-always-comparable approaches. The only way to obtain a conclusive answer to the question of whether the pill can cause or prevent cancer in humans, he declares, is to design better programs for testing compounds in animals and patients. The NCI is presently working up such programs. □

MMPI questions

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Stonehenge: A calendar or just a crematorium?

Between 2000 and 1500 B.C. an impressive ceremonial temple—Stonehenge—was erected in Great Britain. Archaeological reconstruction of the site shows that the monument consisted of a circle of immense, finely tooled stone archways surrounded by a ring of 56 equally spaced Aubrey holes (named for their modern discoverer). Looking out from the center of Stonehenge, the Heel Stone can be seen. It marks on the horizon the point of sunrise at the summer solstice. This fact, and the precisely proportioned placement of the stones and holes, has led archaeologists to presume that the monument had some great astrological significance to its Neolithic architects.

In 1963 Gerald S. Hawkins of Boston University and the Harvard-Smithsonian Observatory suggested that the Aubrey holes provided a system for counting the years of a 56-year cycle of eclipses. "Perhaps," he said, "cremations were performed in a particular hole during the course of the year, or perhaps the hole was marked by a movable stone."

Now Robert R. Newton and Robert E. Jenkins of the Applied Physics Laboratory of Johns Hopkins University in Silver Spring, Md., say the Aubrey holes were probably used to count months, not years, if they were used as counters at all.

The physicists arrived at this conclusion as an off-shoot of a project in which they were attempting to predict the orbits of manmade satellites. One method of verifying such data is to apply it to the moon and then predict backward and check the results against ancient observations of lunar and solar eclipses. Doing so, the researchers found a 111- or 112-month cycle coinciding with the position of the setting of the summer new moon. They explain in the Oct. 27 NATURE that the Stonehengers "could easily have made these predictions with the use of a counting circle of 111 holes. If they preferred not to build a circle with this many holes, they could have used a circle of 56 holes just as easily." Two times around the circle would predict the summer new moon.

Jenkins says the lunar calendar is more likely than the eclipse predictor, but admits that it is just as speculative a hypothesis. "In fact," he says, "we are starting to conclude that you could find support for or against almost any theory." The Heel Stone may have been used to mark the summer solstice but the Aubrey holes may have no astrological significance at all. As an alternate explanation, the researchers say perhaps there were 56 families, clans or social units who built Stonehenge and who were entitled to dig one of the Aubrey holes and use it to inter cremated remains. □

Glomar's Leg 26 finds old Indian Ocean sediments

Scientists on Leg 26 of the Deep Sea Drilling Project have returned to port with the oldest sediments yet recovered from the Indian Ocean, evidence about the identity of a suspected continental fragment and an outline of the history of two ridges.

The Glomar Challenger docked at Fremantle, Australia, Oct. 30 after a two-month, 5,580-mile excursion through the Indian Ocean. The ship left Durban, South Africa, Sept. 6 and its scientists drilled at nine of the ten sites planned.

The Leg 26 researchers, led by Bruce Luyendyk of Woods Hole Oceanographic Institution and Thomas A. Davies of Scripps Institution of Oceanography, drilled at two sites in the Wharton basin, west of Australia. One produced sediments 101 million years old. The other site, farther south, contained even older sediments—105 million years. On the Naturaliste Plateau southwest of Australia they found sedi-