

# *Reducing Uterine and Ovarian Mortality Risks of Religious Sisters*

## *A Critique and Counterproposal*

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*Abstract.* Consecrated women religious have been shown to be at increased risk for uterine and ovarian cancers. The authors critique a proposal by Kara Britt and Roger Short advocating the distribution of a combined oral contraceptive to women religious as a way of reducing this risk. The authors argue that the proposal is seriously flawed: the data it references attenuate its conclusion, the execution protocol is incomplete, and the proposal fails to address the serious health risks of combined oral contraceptives. As a counterproposal, the authors recommend that women religious be taught to monitor their gynecologic health by charting their menstrual and ovulatory cycles. *National Catholic Bioethics Quarterly* 12.2 (Summer 2012): 235–239.

In a short item in the British medical journal *Lancet*, Kara Britt and Roger Short propose that the Catholic Church provide a combined oral contraceptive (COC) to all Catholic “nuns” to reduce their increased mortality risks from ovarian and uterine cancers.<sup>1</sup> The premises of Britt and Short’s proposal rely on data that contrast the

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<sup>1</sup> Kara Britt and Roger Short, “The Plight of Nuns: Hazards of Nulliparity,” *Lancet* 379.9834 (June 23, 2012): 2322–2323. Combined oral contraceptives (COCs) are oral

*increased* uterine and ovarian mortality risk of nulliparous, celibate Sisters with the *decreased* risk of their parous counterparts, predicated on their respective increased or decreased exposure to menstrual or ovulatory cycles.<sup>2</sup> Britt and Short conclude that, since COC use would provide Sisters a “break” from their cycles, comparable to that afforded their parous, breast-feeding cohorts, it would also reduce the Sisters’ uterine and ovarian mortality risks.

Our first response is to criticize the proposal itself on grounds that (a) its referenced data attenuate, if not contradict, its conclusion; (b) its execution protocol is incomplete; and (c) its minimization of adverse effects fails to address the serious health risks for Sisters using COCs. Our second response is to suggest an alternative protocol for reducing uterine or ovarian mortality risks of Sisters.

### Critique

With respect to our critique, we note the following problems with the Britt and Short proposal: data ambiguity, minimization of adverse effects, and incomplete execution protocol.

#### *Data Ambiguity*

First, given our current treatments and advanced screening, we question whether the graphic data accompanying Britt and Short’s article (comparing the 1900–1954 mortality rates of American “nuns” with those of the American “female population”) is representative of current uterine and ovarian mortality rates of these two cohorts.<sup>3</sup> Second, even if the graphic data coincide with current mortality rates, the depicted rates of death from breast, uterine, and ovarian cancers for the forty- to over eighty-year-old nulliparous Sisters compared to that of their forty- to over eighty-year-old parous counterparts *contradict*, rather than support, Britt and Short’s hypothesis. For example, the graphs show that (a) before age seventy, the Sisters had a *lower* rate of death from uterine cancer than the control group; (b) comparative rates of death due to ovarian cancer *fluctuate* before age eighty, with the Sisters’ rate of death between

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contraceptives that contain both an estrogen and a progestogen. Kara Britt is with the Prostate and Breast Cancer Research Group in the Department of Anatomy and Developmental Biology at Monash University in Victoria, Australia. Roger Short is on the Faculty of Medicine, Dentistry and Health Sciences at the University of Melbourne in Victoria, Australia.

<sup>2</sup> Since Britt and Short are proposing their COC protocol for all Roman Catholic consecrated women religious worldwide, we will refer to these celibate, nulliparous women as “Sisters” since that title appropriately designates both nuns (those who carry out their life of intercessory prayer within the walls of a monastery) and those who carry out their apostolic work outside the confines of a convent.

<sup>3</sup> For example, researchers examined treatment changes and survival rates from endometrial cancer over a thirty-year period (1981 to 2010) in a cohort of Norwegian patients. They found that five-year disease-specific survival increased from 75.8 to 86.9 percent and overall survival from 67.8 to 77.8 percent. Both of these values are statistically significant, with *p*-values less than 0.05. Jone Trovik et al., “Improved Survival Related to Changes in Endometrial Cancer Treatment, a 30-Year Population Based Perspective,” *Gynecologic Oncology* 125.2 (May 2012): 381–387.

ages forty and seventy being sometimes only slightly above, sometimes below, and sometimes equal to that of their forty- to over eighty-year-old parous counterparts; and (c) the Sisters in all age groups (forty to over eighty years) were at a *consistently higher* mortality rate not for uterine or ovarian cancers, as Britt and Short claim, but only for breast cancer—the very cancer whose related mortality rate, according to Britt and Short, would not decrease as a result of COC use.

#### *Minimization of Adverse Effects*

While Britt and Short acknowledge “the possibility of health risks,” they fail to stress the clinician’s duty to adequately counsel Sisters on the risks, benefits, and alternatives to COC use. The health care provider needs to *specify* what those risks and benefits entail. They need to specify, for example, that compared to a woman not using hormonal contraception, the woman who uses the COC for five years incurs the benefit of a 40 percent decrease in ovarian cancer mortality risk but a 100 percent increased risk for venous thromboembolism, a 24 percent increased risk for breast cancer during COC use, and at least a 100 percent increased risk for myocardial infarction.<sup>4</sup> To garner a Sister’s appropriately informed consent, counseling should also include a discussion of milder, though possibly debilitating, COC side effects, such as bloating, breast tenderness, headaches, irregular bleeding, mood changes, and nausea. Then, to enable proper discussion of alternatives, providers should inform Sisters that COC use is not the only available prophylactic treatment for increased risk of uterine or ovarian mortality. Providers could consider the proposal we describe below or even the more radical surgical option of hysterectomy with bilateral oophorectomy that is often suggested for women with increased risk of uterine or ovarian cancer (for example, women with BRCA1 or BRCA2 mutations). Finally, in the interest of full disclosure, Britt and Short should have addressed the adverse health implications behind the World Health Organization’s decision to classify the oral contraceptive as a carcinogen and the warning on package inserts that use of commonly prescribed COCs “may increase risk of breast cancer and cancer of the reproductive organs.”<sup>5</sup>

#### *Incomplete Execution Protocol*

Britt and Short’s proposal fails to stipulate duration, onset, discontinuation, and pattern of COC use—parameters that need to be in place to accurately predict the percentage of uterine and ovarian mortality risk reduction. Since both the informed

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<sup>4</sup> Roberta B. Ness et al., “Risk of Ovarian Cancer in Relation to Estrogen and Progestin Dose and Use Characteristics of Oral Contraceptives,” *American Journal of Epidemiology* 152.3 (August 1, 2000): 233–241; Mimi Ziemann et al., *Managing Contraception for your Pocket*, 10th ed. (Tiger, GA: Bridging the Gap Foundation, 2010): 97; and Loestrin 24 Fe package insert (rev. October 2009), Warner Chilcott, [http://www.loestrin24.com/loestrin/pdf/pi\\_loestrin24\\_fe.pdf](http://www.loestrin24.com/loestrin/pdf/pi_loestrin24_fe.pdf).

<sup>5</sup> World Health Organization, “Agents Classified by the *IARC Monographs*, Volumes 1–105” (updated June 20, 2012), 12, International Agency for Research on Cancer, <http://monographs.iarc.fr/ENG/Classification/ClassificationsAlphaOrder.pdf>. PDR Network, “Loestrin 21” Concise Monograph (no date), PDR.net, <http://www.pdr.net/drugpages/concisemonograph.aspx?concise=1031&currentId=31585>.

consent of Sisters who would use COCs and the objective evaluation of proposal effectiveness by the medical community depend on such specifications, this is a serious oversight.

### Alternative Protocol

Our second response to Britt and Short's proposal is to propose an alternative protocol. A trained instructor would teach every woman of reproductive age who enters religious life how to chart her cycle using the Creighton Model FertilityCare System.<sup>6</sup> The woman would continue charting her menstrual and ovulatory cycles throughout her years of formative training and, invariably, for the duration of her reproductive life.<sup>7</sup> This charting allows for early identification of cycle abnormalities such as those caused by polycystic ovary syndrome (PCOS). Our clinical experience shows that women who present with PCOS are at higher risk of developing uterine cancer. Therefore, we would further investigate this chart-suggested diagnosis with gynecological ultrasound, hormone testing, or direct visualization at time of surgery.<sup>8</sup> Once confirmed, we would treat the PCOS with progesterone supplementation (the natural hormone), which can be given orally or by intramuscular injection on certain days of the cycle.<sup>9</sup> This regimen would normalize the Sister's cycle and might increase her ability to ovulate properly.<sup>10</sup> Hence, the cycle-cooperative administration of progesterone would provide the Sister with a prophylactic treatment against what could be an early precursor condition to uterine cancer.

The working hypothesis of our attempt to reduce Sisters' mortality risk from uterine cancer—that continuous exposure to *abnormal* cycles puts Sisters at increased risk—also applies to reduction of their ovarian mortality risks. In respect to the latter, then, we would require that the individual Sister be screened for six ovulatory defects using a gynecological ultrasound timed cooperatively with the periovulatory phase of her cycle.<sup>11</sup> If an ovulatory defect were detected,

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<sup>6</sup> Thomas W. Hilgers, *The Medical and Surgical Practice of NaProTECHNOLOGY* (Omaha, NE: Pope Paul VI Institute Press, 2004), 43–165.

<sup>7</sup> See Renée Mirkes, "Fertility Awareness and Women Religious," *Review for Religious* 59.3 (May–June 2000): 277–285, for an extended discussion of the potential physical or spiritual health benefits for Sisters who chart their menstrual or ovulatory cycles.

<sup>8</sup> To document polycystic ovaries, we conduct a pelvic ultrasound to determine the presence of multiple small follicles or cysts on the periphery of the ovary (the classic PCOS "string of pearls" effect) and the associated increased ovarian size. In the case of a woman with suspected PCOS, we test follicular function (preovulatory estradiol levels) and luteal function (postovulatory progesterone and estradiol levels) and on peak +7 perform a battery of additional hormone assays measuring FSH, LH, DHEAS, androstenedione, prolactin, total and free testosterone, and thyroid function. In addition, we conduct insulin-resistance tests.

<sup>9</sup> Hilgers, *NaProTECHNOLOGY*, 586.

<sup>10</sup> *Ibid.*, 585.

<sup>11</sup> *Ibid.*, 262–267. To document the possibility of an ovulatory defect, we conduct pelvic ultrasound on each day of the periovulatory phase of the woman's cycle to determine whether normal ovulation occurs (i.e., whether the follicular size and appearance parameters for normal ovulation set down by Hilgers have been met).

we would treat it and its associated post-ovulation hormone abnormalities with cycle-cooperative therapy.<sup>12</sup>

In conclusion, our alternative protocol first questions the validity of the hypothesis of the Britt and Short proposal: COC use, by reducing the exposure of Sisters to normal menstrual or ovulatory cycles, reduces their mortality risk from uterine and ovarian cancers. Second, our protocol replaces Britt and Short's proposal with a hypothesis shaped on the anvil of more than thirty-five years of clinical research at the Pope Paul VI Institute: reducing exposure of women to abnormal cyclic patterns that may be precursor conditions to uterine and ovarian cancers could prove to be an effective and responsible means of reducing Sisters' increased mortality risk from these respective cancers.

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<sup>12</sup> *Ibid.*, 607–633.