THE AUTHORS REPLY

We thank Dr. Shapiro (1) for his comments on our paper (2). Dr. Shapiro criticizes as “without precedent” the use of less than 1 year of oral contraceptive use (never use combined with 1–11 months of use) as the reference category in our analysis of the relation of oral contraceptive use to breast cancer risk based on Case-Control Surveillance Study data collected from 1993 to 2007. Other investigators have also used this reference category (e.g., Dolle et al. (3) in a recent study of breast cancer). We used this reference category in an earlier paper on oral contraceptive use and breast cancer risk based on Case-Control Surveillance Study data collected from 1993 to 2007. Other investigators have also used this reference category (e.g., Dolle et al. (3) in a recent study of breast cancer). We used this reference category in an earlier paper on oral contraceptive use and breast cancer risk based on data collected in the Case-Control Surveillance Study during 1977–1992, of which Dr. Shapiro was the senior author (4). As we stated in the earlier paper, “Less than 1 year of use was used as the reference category in all analyses because the inclusion of short-term users would serve to reduce bias arising from cases who remembered short-term use better than controls” (4, page 26). The data we provided to Dr. Shapiro support this reasoning and confirm that the odds ratios were greater for longer-duration use than for shorter-duration use and for more recent use than for more distant use, just as we found in our analyses based on less than 1 year of use as the reference category (2).

Dr. Shapiro (1) posits that either of 2 sources of bias could easily account for an odds ratio of 1.5 for 1–11 months of oral contraceptive use. One is selective detection among short-term users of 1 case of otherwise occult breast cancer, and the other is overreporting of short-term use by 1% among cases or underreporting by 1% among controls. We could not work out the arithmetic whereby Dr. Shapiro arrived at an odds ratio as large as 1.5 or even close to that value from these postulated scenarios.

We regret not having cited the study by Shapiro et al. (5) of oral contraceptive use in relation to breast cancer, conducted from 1994 to 1997 in South Africa. That study was mounted to assess the association of use of injectable progestogen contraceptive with risk of breast cancer. However, the study did indeed collect information on oral contraceptives, which are much less commonly used than injectable contraceptives by the population studied, women of mixed racial or black ancestry. Dr. Shapiro cites the null results on oral contraceptive use in relation to breast cancer risk among women aged 35–54 years. However, he fails to report that the overall odds ratio for ever oral contraceptive use relative to never use was 1.2 (95% confidence interval: 1.0, 1.5) and that the odds ratio for ever use was 1.7 (95% confidence interval: 1.0, 3.0) among women less than 35 years of age. In addition, among women less than age 35 years, the odds ratio was significantly increased for those who had used oral contraceptives for durations of less than 1 year (odds ratio = 2.1) relative to never use, again supporting our concern about reporting bias; there also was a significantly increased odds ratio for women with durations of use of 1–4 years (odds ratio = 2.0). The detection bias that Dr. Shapiro (1) suggests could explain the Case-Control Surveillance Study results is not a plausible explanation for the findings in the South African study because access to breast cancer screening was quite limited in the population studied.

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REFERENCES

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