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40–44 at 14.7 cases per 100,000, decreasing to 11.3, 11.2, 10.1, 8.8, and 8 among women ages 60–64, 65–69, 70–74, 75–79, 80–84, and 85+, respectively. The authors concluded there is less benefit for cervical cancer screening in the elderly.

A cohort study assessed the risks and benefits of performing annual Pap smears. This study enrolled 2,561 postmenopausal women with baseline normal Pap smears and followed them for an average of 4.1 years. At 2 years after the initial normal Pap smear, abnormal cervical cytologies (ie, atypical squamous cells of undetermined significance, atypical glandular cells of undetermined significance, low-grade and high-grade squamous epithelial lesions) were noted in 103 women (23 per 1,000 person-years). Only 1 patient had mild to moderate dysplasia diagnosed after cone and cervical biopsy. Therefore, the positive predictive value of cervical cytology within 2 years of a normal cytology was 0.9% (95% CI, 0.0–3.0).

A study using a mathematical model (the Duke Cervical Cancer model) examined how many colposcopies per life-year gained are associated with each of the different ages for beginning cervical cancer screening, varying in 1-year increments. This model used the natural history of human papillomavirus (HPV) data and the impact of screening on the prevention of progression of cervical cytology abnormalities in a cohort of unvaccinated girls, who would be followed until either death or age 100.

If screening was conducted every 5 years ending at age 70, 37 colposcopies per 1,000 women would be needed and there would be 9 cancer deaths per 1,000 women. Conversely, if 5-yearly screening is extended to age 90, the number of colposcopies needed increases to 136 colposcopies per 1,000 women, but the number of deaths remain very similar at 8 per 1,000 women. The authors concluded that older women would have unnecessary evaluations for false-positive findings with no mortality benefit.

The most recent guidelines by the USPSTF, also accepted by the American College of Obstetrics and Gynecology and the American Cancer Society, recommend cessation of screening at age 65 in women who have had adequate screening. The USPSTF recommends against screening for women older than 65 years (Grade D, not recommended). Adequate screening is defined as 3 prior consecutive negative cytology results or 2 consecutive negative HPV results within 10 years before cessation of screening, with the most recent test occurring within 5 years. Routine screening should continue for at least 20 years after spontaneous regression or appropriate management of a high-grade precancerous lesion, even in women aged 65 and older.

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Does isonicotinic acid hydrazide treatment alter the efficacy of OCPs?

Evidence-based Answer
Isonicotinic acid hydrazide (INH) does not appear to alter the efficacy of oral contraceptive pills (OCPs) (SOR: C, metabolic outcome study and expert opinion).

In 1980, a nonblinded, nonrandomized, metabolic outcome study in India examined the interactions of tuberculosis treatment and a combination OCPs containing norethisterone (NET) and ethinyl estradiol (EE). This trial involved 35 women ages 19 to 36 years, all taking the OCP.

Group I included 10 healthy menstruating women who served as the control and group II consisted of 8 women with tuberculosis taking triple therapy, which included INH, but not rifampin. Group III consisted of 12 women taking only INH. Group IV consisted of 9 women: 5 with tuberculosis, 4 who were healthy and all taking rifampin monotherapy. Multiple blood samples were collected from groups II and IV to determine the effect of antitubercular therapy on NET, EE, and progesterone levels. Progesterone levels of more than 4 ng/mL were considered indicative of ovulation.

Group II (triple therapy) women all had progesterone levels consistent with anovulation, and NET and EE levels were not statistically different from...
the control group I. By contrast, group IV (rifampin) women showed a statistically significant decrease in NET levels. In group IV, 2 women had progesterone values consistent with ovulation, and 3 women had breakthrough menstrual bleeding. The study suggested a decrease in OCP efficacy with rifampin, but not with the triple therapy that included INH.1

The Clinical Effectiveness Unit (CEU) is an academic collaboration between the University of London and the Royal College of Surgeons to publish clinical guidelines based on evidence-based research.2 In 2012, the CEU updated its guidelines on drug interactions with hormonal contraception. The CEU concluded that no additional contraception would be indicated if OCPs are taken with antibiotics that do not induce hepatic enzymes (Grade C, based on expert opinion), a group that would include INH. The guideline does not mention INH specifically.

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What prognostic tools are helpful for assessing patients with late-stage Alzheimer’s disease for hospice care?

Evidence-Based Answer

A Mini-Suffering State Examination (MSSE) score of ≥4 is useful for predicting 6-month mortality in patients with advanced dementia. An Advanced Dementia Prognostic Tool (ADEPT) score of ≥11 is more sensitive (but less specific) than the Medicare hospice eligibility guidelines for predicting 6-month mortality in late-stage dementia (SOR: B, cohort studies).

Medicare hospice eligibility guidelines for dementia include at least 1 of the following medical conditions in the prior 12 months: aspiration pneumonia, pyelonephritis, septicemia, multiple decubitus ulcers of higher than stage 3, recurrent fever after antibiotics, or poor nutritional status; and a Functional Assessment Staging Scale (FAST) stage of at least 7c.1 The FAST is a dementia rating scale consisting of 16 ordinal phases and assesses cognitive decline and skill levels (stages range from 1 to 7f, higher scores indicate worse severity). Stage 7 consists of the following substages: 7a—speech is limited to <5 words, 7b—all intelligible vocabulary is lost, 7c—nonambulatory, 7d—unable to sit independently, 7e—unable to smile, and 7f—unable to hold head up.

In 2008, a prospective cohort study evaluated the ability of the MSSE score to predict 6-month mortality in 109 patients (age range 51–96 years) with end-stage dementia.2 Diagnosis of dementia was based on the Diagnostic and Statistical Manual of Mental Disorders 4th edition–revised criteria and end-stage dementia was defined as dementia interfering with verbal communication and complete dependence in activities of daily living and functional movement.

The MSSE is a validated tool composed of 10 items relating to level of calmness, screaming, pain, decubitus ulcers, malnutrition, eating disorders, performance of invasive procedures, stability of general medical condition, and perception of the patient’s level of suffering assessed by family and medical staff. Each item scores 0 (No) or 1 (Yes) with a maximum score of 10 reflecting the highest degree of suffering.

Survival of patients with low (0–3) and intermediate (4–6) MSSE was 155 days (±8 days) and 92 days (±12 days), respectively. Patients with a high (7–10) MSSE survived only 55 days (±12 days). The difference among the survival curves of the 3 MSSE groups was statistically significant (P=.001). After 6 months of follow-up, mortality rates of patients with low, intermediate, and high MSSE scores were 24.3% (9/37 patients died), 67.8% (27/40 patients with end-stage dementia died), and 84.6% (22/26 patients with end-stage dementia died).2

In 2010, a prospective cohort study compared the ADEPT score and the Medicare hospice eligibility guideline in predicting 6-month survival among 606 nursing home residents aged ≥65 years with advanced dementia defined as a Cognitive Performance Score (CPS) of 5 or 6 indicating very severe cognitive impairment, totally dependent with eating, or comatose.3

The ADEPT score consists of 12 items with total score ranging from 1 to 32.5, with higher scores indicating a greater risk of death. The items are nursing home stay <90 days, age, sex, shortness of breath, at least 1 pressure ulcer at stage 2 or worse, activity of daily