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Research

Buprenorphine Implant for Treatment of Opioid Dependence 282
The effectiveness of buprenorphine to treat opioid dependence can be limited by suboptimal adherence to treatment. Rosenthal and colleagues assessed whether a buprenorphine-containing implant is noninferior to daily sublingual buprenorphine in a double-blind, double-dummy randomized trial that enrolled 177 adults with opioid dependence who were abstinent on a stable dose of sublingual buprenorphine. The authors report that 6 months' use of buprenorphine implants compared with continued sublingual buprenorphine did not result in an inferior likelihood of remaining a responder. In an Editorial, Compton and Volkow discuss interventions to improve outcomes among persons with opioid use disorders.

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Gun Law Reforms and Intentional Firearm Deaths: Australia 291
In 1996, Australia enacted major gun law reforms including a ban on semiautomatic rifles. In an analysis of Australian government statistics on deaths caused by firearms (1970-2013) and news reports of mass shootings in Australia (1979-2016), Chapman and colleagues found that following enactment of the gun law reforms in 1996, no mass firearm killings have occurred in Australia. Firearm deaths declined more rapidly between 1997 and 2013 compared with the trend in firearm deaths before 1997. In an Editorial, Webster discusses gun policy and firearm-related fatalities.

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Ovarian Stimulation for IVF and Risk of Breast Cancer 300
Hormonal treatment in preparation for in vitro fertilization (IVF) procedures causes temporary decreased and elevated levels of estradiol and progesterone, which may influence breast cancer risk. van den Belt-Dusebout and colleagues assessed the association of IVF with breast cancer risk in an analysis of data from 25,108 women treated for infertility between 1980 and 1995 and cancer registry data. The authors report that among women undergoing fertility treatment, IVF treatment compared with non-IVF treatment was not associated with an elevated risk of breast cancer after a median 21 years' follow-up.

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Glucose-Lowering Drugs to Treat Type 2 Diabetes
Numerous glucose-lowering drugs—from 9 drug classes—are approved for treatment of type 2 diabetes. Palmer and colleagues assessed the relative efficacy and safety of these drugs in a review and network meta-analysis of data from 301 randomized trials (1.4 million patient-months of treatment). The authors found no significant differences between any of the 9 classes of glucose-lowering drugs—used either alone or in combination—and the risk of cardiovascular or all-cause mortality. Metformin was associated with lower or comparable hemoglobin A1c levels compared with the other drug classes given as monotherapy.

Clinical Review & Education

Cellulitis
Cellulitis can be a diagnostic and therapeutic challenge. Based on a systematic review that identified 123 pertinent articles, Raff and Kroshinsky summarize the evidence relating to the epidemiology, pathophysiology, microbiology, diagnosis, and treatment of cellulitis. Cellulitis is common, and the diagnosis is based primarily on patient history and physical examination findings. Antibiotic treatment of uncomplicated cellulitis should be directed against Streptococcus and methicillin-sensitive Staphylococcus aureus. Methicillin-resistant S aureus should be considered in high-risk patient populations.

Clinical Management of Opioid Addiction
This JAMA Clinical Guidelines Synopsis article provides a summary of A Guideline for the Clinical Management of Opioid Addiction developed by a multidisciplinary group in British Columbia. Withdrawal alone is not recommended; rather, patients should be offered medically supervised opioid agonist treatment. High-quality evidence supports buprenorphine-naloxone as first-line treatment.

Evaluation of New-Onset Ascites
This JAMA Diagnostic Test Interpretation article by Patel and Muir presents the case of a woman in her 60s with new-onset ascites. She has undifferentiated connective tissue disease and long-standing pulmonary hypertension. She reports no alcohol or illicit drug use and no personal or family history of liver disease. Physical examination findings include jugular venous distension and a bulging abdomen with flank dullness. A diagnostic paracentesis was performed. How would you interpret the results?