

# What's new in

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## ► **Timing of elective surgery after COVID-19 diagnosis**

- Perioperative morbidity and mortality are increased in patients with COVID-19; the optimal timing for elective surgery after contracting infection is unclear. In an international, prospective study of >140,000 patients undergoing elective or emergency surgery in October 2020 (>3100 with preoperative COVID-19), patients with COVID-19 who had surgery <7 weeks from the diagnosis had a three- to four-fold increase in 30-day mortality compared with uninfected patients [127]. Mortality risk returned to baseline when surgery was performed ≥7 weeks after diagnosis, except in patients with ongoing COVID-19 symptoms. Ideally, elective surgery should be delayed until the patient is asymptomatic and has recovered baseline cardiopulmonary status, while taking into account the risks of delaying surgery. (See ["COVID-19: Anesthetic concerns, including airway management and infection control"](#), section on 'Risk of surgery with COVID-19'.)

## AIRWAY MANAGEMENT

- **Serious adverse events during emergency intubation**
- Serious adverse events are common during emergency intubation. In a prospective, international study of approximately 3000 consecutive intubations in critically ill adults in the intensive care unit, emergency department, or ward, 45 percent had at least one major adverse event, most commonly cardiovascular instability [5]. Cardiac arrest occurred in 3 percent of patients, with an associated 50 percent mortality. Use of ketamine or etomidate for induction was associated with a lower risk of cardiovascular instability compared with propofol or midazolam. (See "Complications of airway management in adults", section on 'Hemodynamic changes'.)

- **Opioid-free maintenance of general anesthesia**
- Concerns that perioperative intravenous (IV) opioids may contribute to persistent postoperative opioid use have led to attempts to avoid or limit their use in this setting. A trial comparing postoperative outcomes in noncardiac surgical patients receiving balanced general anesthetic using desflurane plus IV infusions of nonopioids (ketamine, lidocaine, dexmedetomidine) versus those receiving desflurane plus ketamine, lidocaine, and opioids (remifentanyl plus a morphine bolus at the end of surgery) was stopped early due to five cases of severe bradycardia and more postoperative hypoxemia in the dexmedetomidine group [14]. Other prespecified outcomes (ileus, cognitive dysfunction) did not differ between groups. Since all analgesics have potential adverse effects, the risks, benefits, and alternatives for each selected agent should be considered when planning a perioperative analgesic regimen. (See "Perioperative uses of intravenous opioids in adults: General considerations", section on 'Opioid-free anesthesia'.)

➤ INFECTIOUS DISEASES AND IMMUNIZATIONS

➤ **Newborn screening for congenital CMV infection**

- Universal screening for congenital cytomegalovirus (CMV) infection has been proposed, but the optimal approach to screening remains uncertain. In a study involving >12,000 newborns who were screened using polymerase chain reaction (PCR) testing of dried blood spots (DBS), the sensitivity for detecting congenital CMV infection ranged from 73 to 77 percent [38]. These estimates are considerably higher than previous reports, likely reflecting improvements in the methodologies for CMV PCR testing of newborn DBS. While these findings provide preliminary support for incorporating congenital CMV screening into newborn screening programs, additional data are needed before this can be implemented as a routine. (See "[Congenital cytomegalovirus infection: Clinical features and diagnosis](#)", section on "[Universal newborn screening](#)".)

- MELANOMA AND OTHER SKIN CANCER
- **Safety of immunotherapy in patients with autoimmune disease and melanoma**
- Although data are limited for the safety of checkpoint inhibitor immunotherapy in patients with autoimmune disease (AID) and cancer, most studies suggest increased risk of AID flares and immune-related adverse events (irAEs). In a prospective cohort study with approximately 4400 patients with advanced melanoma, including 415 patients with AID, the incidence of severe irAEs was similar in patients with and without autoimmune disease [62]. However, patients with AID were more likely to discontinue immunotherapy or experience specific irAEs (eg, colitis in those with inflammatory bowel disease). While a majority of patients with AID and cancer may safely receive immunotherapy, clinicians considering this approach should offer a cautious risk-benefit discussion, evaluate for contraindications that require alternative oncologic therapies, and involve the clinician treating the autoimmune condition. (See "Toxicities associated with checkpoint inhibitor immunotherapy", section on 'Preexisting autoimmune disease'.)

### ► DRUG THERAPY

### ► Safety of immunotherapy in patients with autoimmune disease and melanoma

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# What's new in pulmonary and critical care medicine

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### ► CRITICAL CARE

### ► Weaning from mechanical ventilation in the ICU

- For ICU patients on mechanical ventilation for longer than 24 hours, there is no standard weaning practice. A recent international study of 1868 mechanically ventilated patients in 142 intensive care units (ICUs) in six geographic regions (Canada, United States, United Kingdom, Europe, India, Australia/New Zealand) best illustrates the variation in practice including wide ranges reported in written directives to screen for a spontaneous breathing trial (SBT; 5 to 83 percent) as well as the performance of and mode used to conduct an SBT [13]. ICUs in the United States were associated with greater odds of having SBT directives and using an SBT with low-level pressure support compared with ICUs in other regions. Compared with direct extubation, individuals undergoing SBT had higher ICU mortality (10 versus 5 percent), longer median duration of mechanical ventilation (4 versus 3 days), and longer median length of ICU stay (11 versus 8 days) although greater severity of illness likely explains these results given previous trials demonstrating that SBT is efficient, safe, and effective. The wide variation in weaning practices highlighted in this study indicates that further research is needed to determine the best approach and to support its wider implementation. (See ["Initial weaning strategy in mechanically ventilated adults", section on 'Variation in practice'](#).)