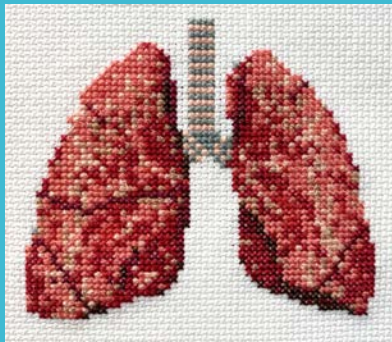


A background image showing a microscopic view of plant cells, likely from a leaf, with a blue color cast. The cells are arranged in a grid-like pattern, with some cells being more prominent than others. The overall tone is light blue and airy.

COVID-19 ICU Care: Best Practices

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UCSD PCCSM

Good ARDS Care



- **Low tidal volume ventilation**

- 6-8 cc/kg IBW
- Solid evidence in ARDS (not specifically tested in COVID-19)

- **Prone positioning**

- Good evidence in ARDS when $\text{PaO}_2:\text{FiO}_2 < 150$
- Growing evidence for non-intubated patients with COVID-19 related hypoxemia
 - PRON-COVID, *Lancet*

- **Paralytics**

- As needed to prevent dyssynchrony & facilitate LTVV
- No systematic COVID-19 specific data

Good ICU Care



- **Quality Care Bundle (ABCDEF, Fast Hugs BID)**

- Sedation
 - Anecdotally, frequent dyssynchrony is resulting in increased benzodiazepine use
- Anticoagulation
 - Prophylactic – definitely beneficial
 - Therapeutic – questionable benefit

- **Treat bacterial infections**

- Estimates for rates of bacterial co-infection: 8%-50%
- Our practice: broad spectrum abx ~48 hrs, de-escalation per cultures

- **NSAIDs likely ok to use**

- Consider usual risks – GI bleeding, AKI, etc.

Cox MJ, Loman N, Bogaert D, O'grady J. Co-infections: potentially lethal and unexplored in COVID-19. *The Lancet Microbe*. 2020 May 1;1(1):e11.

Rawson TM, Moore LS, Zhu N, Ranganathan N, Skolimowska K, Gilchrist M, Satta G, Cooke G, Holmes A. Bacterial and fungal co-infection in individuals with coronavirus: A rapid review to support COVID-19 antimicrobial prescribing. *Clinical Infectious Diseases*. 2020 May 2.

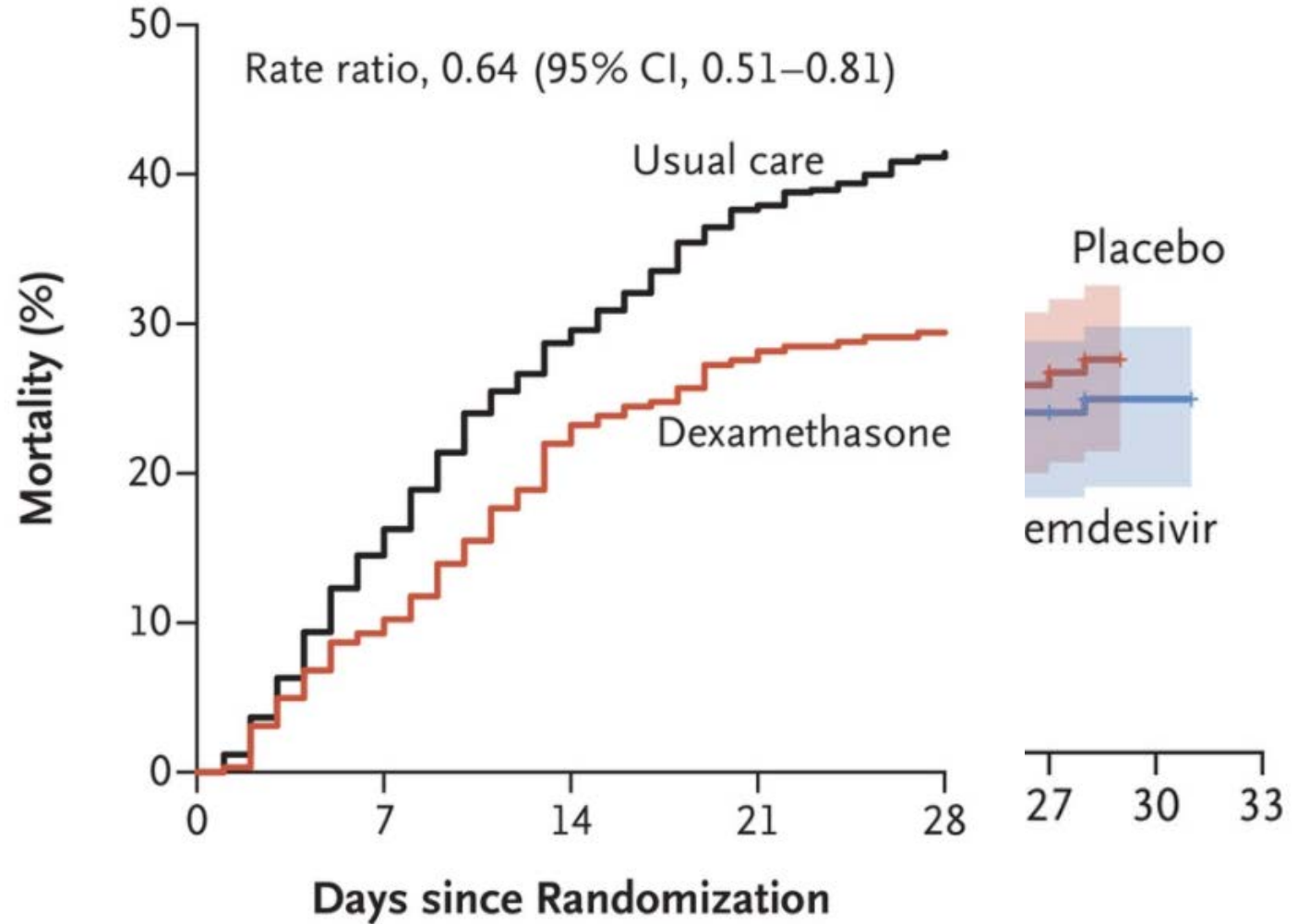
Rinott E, Kozer E, Shapira Y, Bar-Haim A, Youngster I. Ibuprofen use and clinical outcomes in COVID-19 patients. *Clinical Microbiology and Infection*. 2020 Jun 12.

Therapeutics



Cantini F, Niccoli L, Matarrese D, Nicastrì E, Stobbione P, Goli Li L, Zhang W, Hu Y, Tong X, Zheng S, Yang J, Kong Y, Ren I. threatening COVID-19: A Randomized Clinical Trial. *Jama*. 20

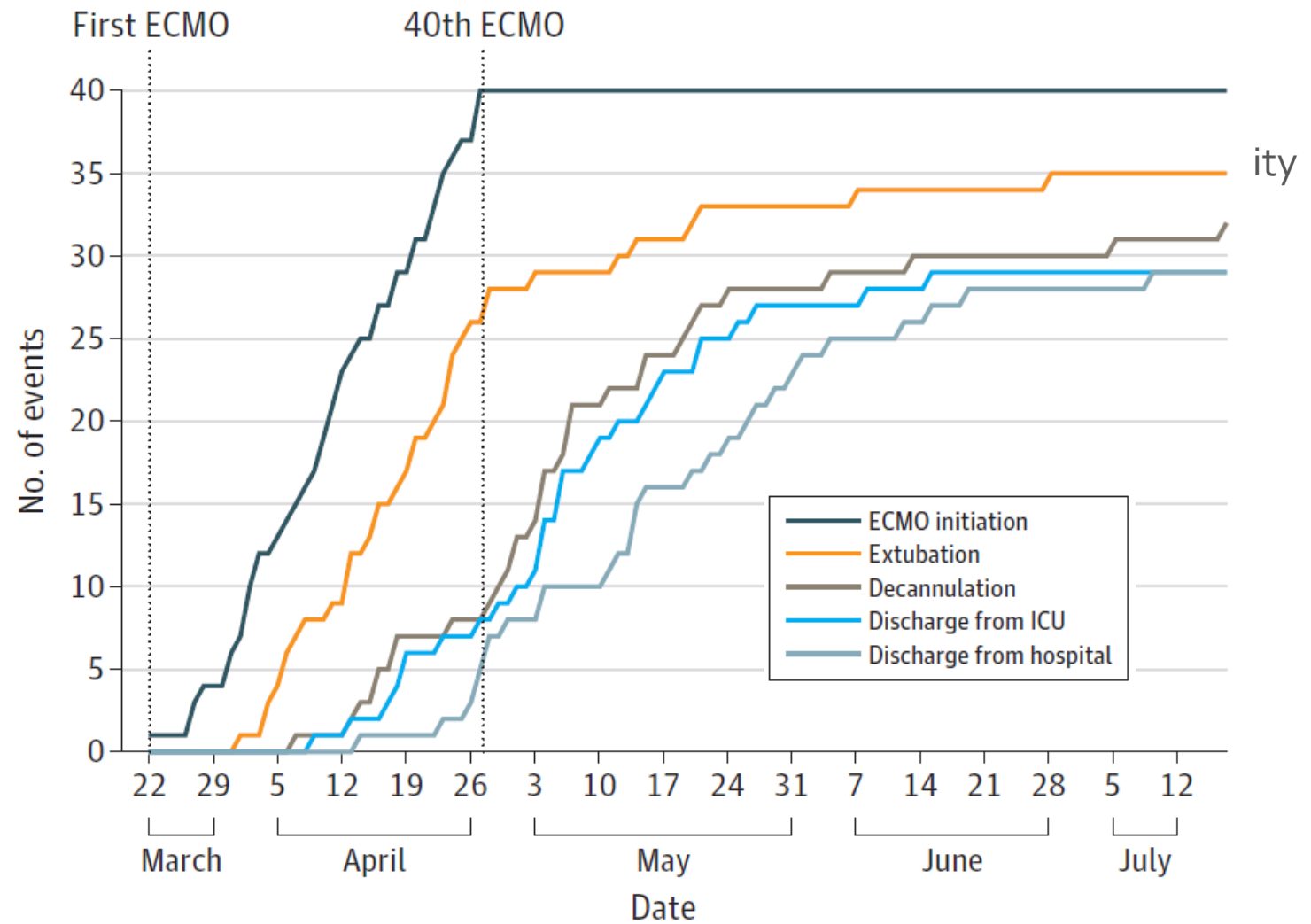
B Invasive Mechanical Ventilation (N=1007)



No. at Risk

Usual care	683	572	481	424	400	34	1	0
Dexamethasone	324	290	248	232	228	33	0	0

Other Considerations



Protecting Staff



- **Thoughtful use of aerosol generating procedures and diagnostics**

- Bronchoscopy, suctioning, sputum culture, chest PT, nebs
- Daily CXR, CT scans, ultrasounds, etc.
- Bundled care where possible

- **Adequate PPE**

- Institution dependent
- At minimum (for intubated patients or those with aerosol generating procedures): Gown, gloves, N95, goggles or faceshield

Psychosocial concerns



- **Staff burnout**

- Encourage regular breaks
- Utilization of debriefs and team check-ins

- **Families**

- Frequent updates by nursing and doctors crucial
- Video conferencing to allow families to see & talk to their loved one
- Visitation as able
- Consider weekly meetings

- **Delirium and PICS**

- Likely long-lasting consequences of ICU stay for patients and their families