

## PATIENT EDUCATION



# DECISION GUIDE FOR EXTRACORPOREAL MEMBRANE OXYGENATION (ECMO) IN RESPIRATORY FAILURE

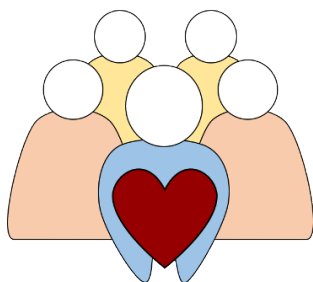


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# Extracorporeal Membrane Oxygenation (ECMO)

When your loved one is sick, you may need to make medical choices for him or her. The medical team is considering the use of extracorporeal membrane oxygenation (ECMO) to help provide support for your loved one's condition.

Our role is to provide you with information about the treatment options. Your role is to think about your loved one's values and wishes when choosing a treatment. Together, we will decide on the best plan.



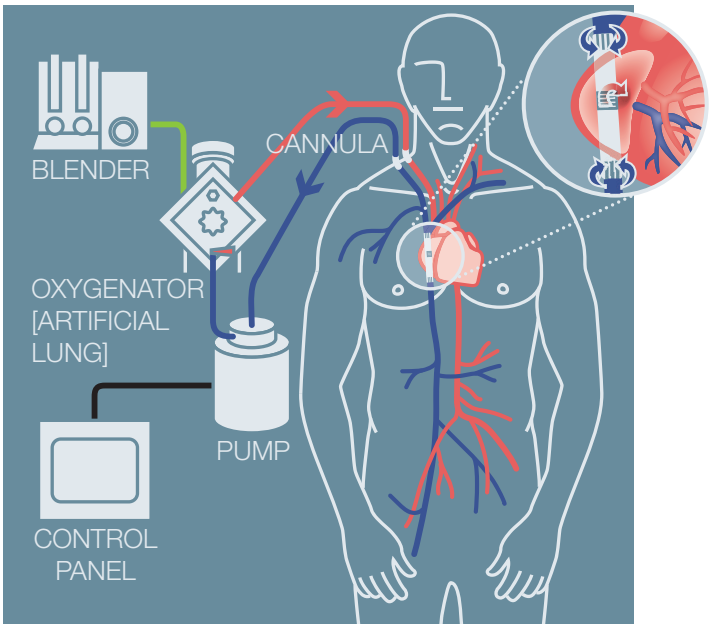
This guide can help to answer the following questions:

- What is ECMO?
- Why might my loved one want ECMO?
- Why might my loved one not want ECMO?
- What are our other options?

# What is ECMO, exactly?

Certain diseases can cause the lungs to fail. If this happens, patients can die from not having enough oxygen.

ECMO is a life support machine that takes blood out of the body, fills it with oxygen, and pumps it back into the body. It temporarily replaces the lungs. This picture shows blood coming out from a large vein (blue) and back into the body through a large vein (red). The ATS ECMO patient information fact sheet has more information about how this works.



# Why might my loved one want ECMO?

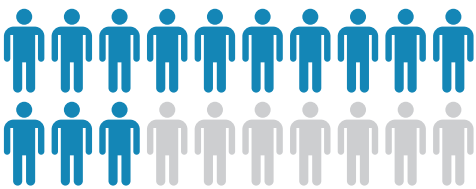
Your loved one is very sick. Normal therapies are not working, and the lungs are failing. We are worried that he or she may die from not having enough oxygen.

ECMO will not cure your loved one's disease, but it will give us more time to provide him or her with treatment. We think that there is still a chance that eventually his or her lungs will recover. If this happens, we can stop ECMO. However, some patients do not get better with ECMO because their disease cannot be fixed.

If you decide that your loved one would want ECMO, it will not be permanent. We will meet regularly to discuss how the treatment is working. Right now, we think ECMO will give your loved one the best chance of survival.

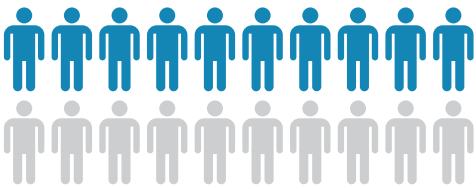
## With ECMO

13 in 20 patients will survive<sup>1</sup>



## Without ECMO

10 in 20 patients will survive<sup>1</sup>



# Why might my loved one not want ECMO?

ECMO may be a life-saving treatment for your loved one. But, there are some serious complications that can happen with ECMO. These could result in lifelong disability.

About 5 in 20 people will have severe bleeding<sup>2</sup>



About 4 in 20 people develop an infection<sup>3</sup>



About 3 in 20 people will get a blood clot in their lungs<sup>4</sup>



About 1 in 20 people will have a stroke<sup>2</sup>

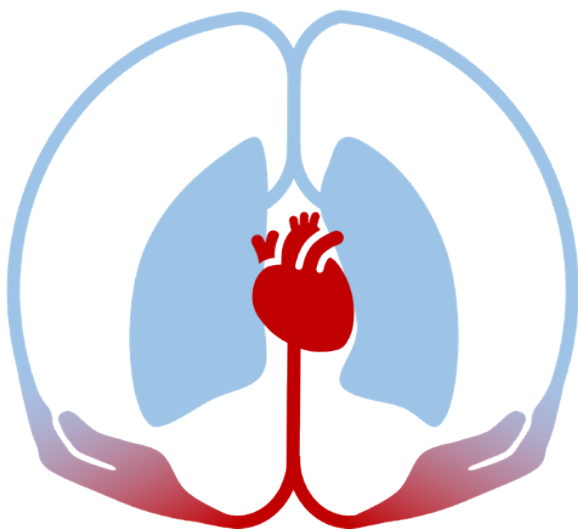


You will always have the choice to stop ECMO if it is causing your loved one too much harm.

## What are other options?

Just because ECMO may increase your loved one's chance of survival does not make it the right choice.

Some people do not think that their loved one would want to risk the complications that can happen with ECMO. Other people know that this type of extreme life-saving measure is not something that their loved one would want.



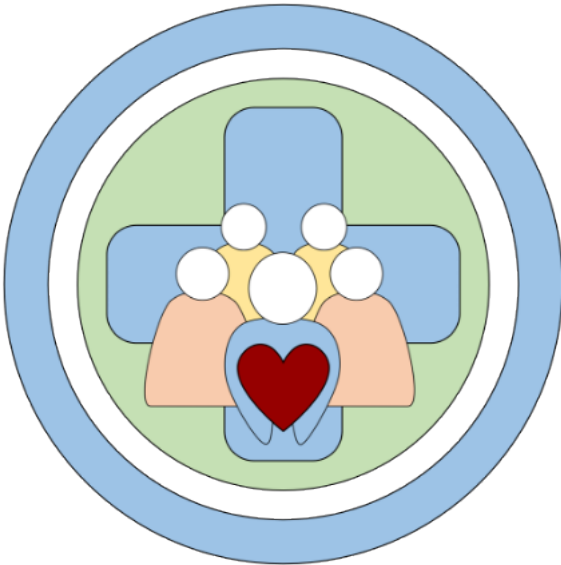
If you do not choose to try ECMO, we can continue providing the best possible medical treatment or we can focus on *palliative care*.

# What are our other options?

Palliative care focuses on relieving physical and emotional symptoms when a cure is unlikely. We stop, or not escalate, active medical treatment and keep your loved one comfortable.

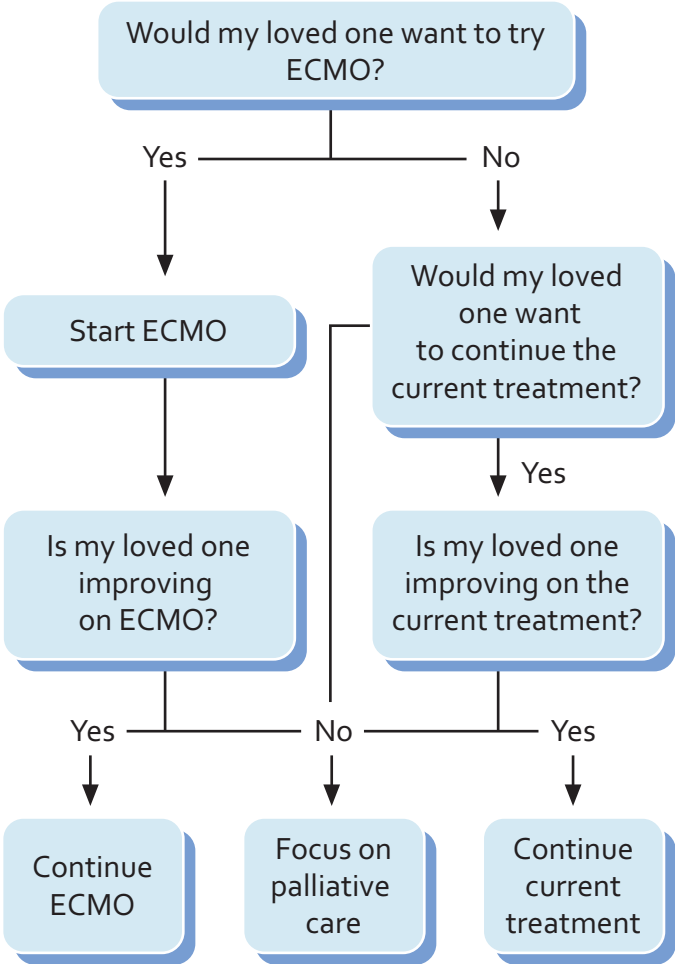
We have a team of professionals to provide emotional, spiritual, and physical support. Palliative care can improve the comfort of the patient and their loved ones.

This choice may be one of the most difficult ones you have made in your entire life, but it does not have to be made alone. We will be with you the entire way



You can refer to the ATS palliative care patient information fact sheet for more details.

# Take some time to think about your choice





# Take some time to think about your choice

Questions are normal at this stage. You may have questions for your loved one’s healthcare team, for your friends and family, or for other patients who have received ECMO. It may help to write them down here. If you want, we can ask a palliative care specialist or spiritual care worker to talk to you. Once you have decided, we will arrange another meeting to come up with a plan.

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# Resources and References

The following link will take you to ATS Patient Information Series fact sheets and guides:

<https://www.thoracic.org/patients/patient-resources/fact-sheets-az.php>

These fact sheets and guides may contain helpful information for you:

1. Acute Respiratory Distress Syndrome (ARDS)
2. ECMO
3. Influenza (Flu)
4. Palliative Care
5. Pneumonia

The following links will take you to a guide for patients and families managing the ICU experience:

English: <https://www.thoracic.org/patients/resources/managing-the-icu-experience.pdf>

Spanish: <https://www.thoracic.org/patients/patient-resources/resources/spanish/managing-the-icu-experience.pdf>

Portuguese: <https://www.thoracic.org/patients/patient-resources/resources/portuguese/managing-the-icu-experience.pdf>

These materials are also available in audio format at:

<https://www.thoracic.org/patients/patient-resources/audio.php>

The following link will take you to a website where patients and their families share their experience with ECMO:

<https://ecmofamilysupport.com/>

## References:

1. Munshi M et al. Venovenous extracorporeal membrane oxygenation for acute respiratory distress syndrome: a systematic review and meta analysis. *Lancet Respir Med*. 2019;7:163.
2. Brodie D et al. Extracorporeal Life Support for Adults With Respiratory Failure and Related Indications: A Review. *JAMA*. 2019;322(6):557.
3. Infection Control and Extracorporeal Life Support. ELSO Task Force on Infectious Disease on ECMO. <https://www.elseo.org/Portals/o/Files/Infection-Control-and-Extracorporeal-Life-Support.pdf>
4. Fisser C et al. Incidence and Risk Factors for Cannula-Related Venous Thrombosis After Venovenous Extracorporeal Membrane Oxygenation in Adult Patients With Acute Respiratory Failure. *Crit Care Med*. 2019;47(4):e332.

For additional information about lung disease,  
visit the ATS Website at [www.thoracic.org/patients](http://www.thoracic.org/patients)



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