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## Killing the Cyborg:

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## Origin of the problem

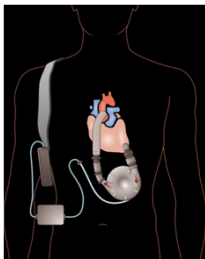
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## Origin of the problem

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## A Patient's Request

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*case study*

“Doctor, Will You Turn Off  
My LVAD?”

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## Some controversy

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**DEBATE** Open Access

End-of-life discontinuation of destination therapy with cardiac and ventilatory support medical devices: physician-assisted death or allowing the patient to die?

Mohamed Y Rady<sup>1,2\*</sup>, Joseph L Verheijde<sup>2,3,4</sup>

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## Some controversy

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We posit that discontinuing cardiac and/or ventilatory support at the request of a patient or surrogate can be viewed as allowing the patient to die if—and only if—concurrent lethal pathophysiological conditions are present that are unrelated to those functions already supported by medical devices in destination therapy.

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## Some controversy

In all other cases, compliance with a patient's request constitutes physician-assisted death because of the pathophysiology induced by the turning off of these medical devices, as well as the intention, causation, and moral responsibility of the ensuing death.

## Ethical-Legal Conventions

- A patient with decision-making capacity has the legal right to refuse or request the withdrawal of any medical treatment or intervention, regardless of whether he or she is terminally ill, and regardless of whether the treatment prolongs life and its withdrawal results in death.

## Ethical-Legal Conventions

- Legally and ethically, carrying out a request to withdraw life-sustaining treatment is neither physician-assisted suicide nor euthanasia.

## Ethical-Legal Conventions

- The right to refuse or request the withdrawal of a treatment is a personal right of the patient and does not depend on the characteristics of the particular treatment involved.

## Ethical-Legal Conventions


A treatment's *effectiveness is its ability to alter the natural history of a disease. Benefits and burdens, however, are determined by the patient; i.e., the patient's assessment of the treatment's value versus its existing and potential discomforts, costs and inconveniences associated with his/her illness and its treatment. Each patient is unique and weighs such benefits and burdens in relation to their own values, preferences and health care-related goals.*

## Ethical-Legal Conventions

from:  
Heart Rhythm Society Expert Consensus Statement on the Management of Cardiovascular Implantable Electronic Devices (CIEDs) in patients nearing end of life or requesting withdrawal of therapy

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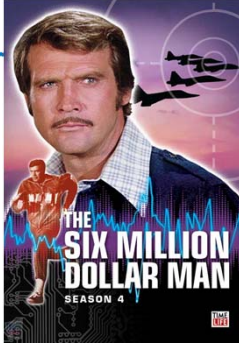
## What is a cyborg?

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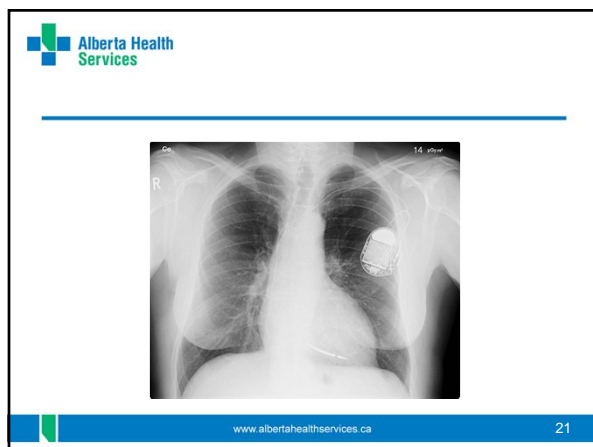
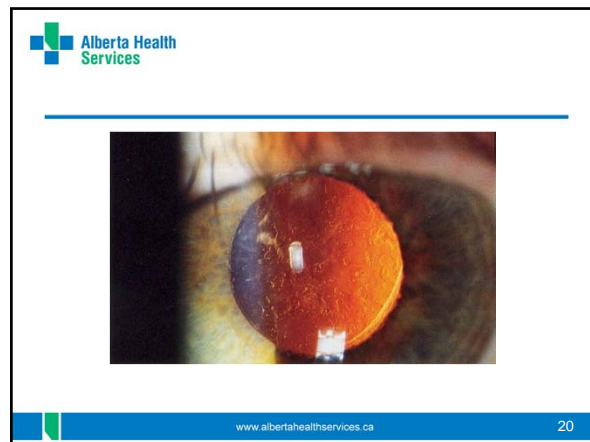
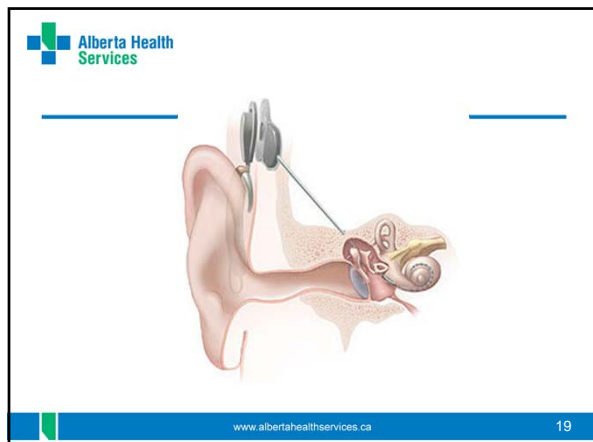
## What is a cyborg?

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Definition for our purposes:

A 'cyborg' is created when a technological intervention replaces one or more biological or physiological functions of a living being, such that the technology is fully integrated and functionally indistinguishable from a comparable biological structure.

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## Recalling Ethical-Legal Conventions

- The right to refuse or request the withdrawal of a treatment is a personal right of the patient and does not depend on the characteristics of the particular treatment involved (Including *Cardiovascular Implantable Electronic Devices* i.e. CIEDs).

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## Relevant distinctions

Constitutive versus Regulative therapies  
(difference between types of pacemakers)

Under Constitutive  
Replacement versus Substitutive therapies  
(difference between dialysis and transplant)

Conventional versus 'cyborg'?

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## Thinking about burden

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## Burden of conventional treatment

A Venn diagram consisting of two overlapping light blue circles. The left circle is labeled 'Burden of Illness' and the right circle is labeled 'Medical Treatment'. The overlapping area in the center is shaded slightly darker.

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## Burden of 'cyborg' interventions

Two separate, non-overlapping light blue circles. The left circle is labeled 'Burden of Illness' and the right circle is labeled '"cyborg" Interventions'.

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## Thinking about burden

Catholic Tradition:

Ordinary versus Extraordinary

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## Thinking about burden

Catholic Tradition:

Ordinary versus Extraordinary

Transitions to:

Proportionate versus Disproportionate Burden of medical intervention

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## Conventional thinking about CIEDs

**Turning off the pacemaker**

According to a consensus statement by the Heart Rhythm Society, it is legal and ethical to honor requests by patients, or by those with legal authority to make decisions for patients, to deactivate implanted cardiac devices. Lawyers say that the legal situation is similar to removing a feeding tube. A patient has a right to refuse or discontinue treatment, including a pacemaker that keeps him or her alive. Physicians have a right to refuse to turn it off, but they should refer the patient to a physician who will. Some patients believe that hopeless, debilitating conditions like strokes, in combination with dementia, can cause so much suffering to themselves and their families that they would prefer not to prolong their lives with supportive measures, such as cardiac devices.

Wikipedia entry

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## Argument

1. Autonomy demands we respect patients' first-person privileged assessment of the proportionate benefits and burdens of medical interventions.

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## Argument

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2. Traditional medical treatment is inherently burdensome to some extent or other.

## Argument

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1. Autonomy demands we respect patients' first-person privileged assessment of the proportionate benefits and burdens of medical interventions.
2. Traditional medical treatment is inherently burdensome to some extent or other.
3. It is the inherent unavoidable nature, rather than the objective weight, of burden that shifts the decision to accept or refuse the intervention to domain of the patient.

## Argument

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4. By definition, so-called functional 'cyborg' medical interventions impose no inherent burdens of treatment.

## Argument

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4. By definition, so-called functional 'cyborg' medical interventions impose no inherent burdens of treatment.
5. Patients cannot demand withdrawal of treatment based on burden if that demand forces the physician to disregard some other prima facie legal or moral obligation. i.e. assisting a suicide, or euthanizing a patient.

## For discussion...

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- Does the 'cyborg' distinction do the work it is intended to?



## For discussion...

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- Do CIEDs constitute 'cyborg' tech?
- Does the 'cyborg' distinction do the work it is intended to?
- Does the distinction introduce unintended or unconventional consequences?



## Thanks!

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