Course: Advanced Biology Grade Level: 11/12

Type: Informational/Explanatory Structure: Definition

Teaching Task 11B: After researching the provided resources on organ transplantation, write an essay that defines organ transplantation and explains reasons for requiring organ transplantation, and medical issues involved in identifying recipients and donors, addressing rejection, and regulating organ/tissue transplantation. Support the discussion with evidence from the research. L2 What implications can you draw?

Performance Level: Not Yet

Organ transplantation is usually a required operation in order to save the life of a patient with disease or other problems. Organ transplantation is surgery to replace a bad or improperly functioning organ with a new one from a matching donor. Though this is usually used as last resort for patients if other treatments do not work. It is meant for patients in the final stages of organ failure. Most of the time organ rejection is not the major concern; it is the lack of donors that brings issues.

Organ transplantation is used as a last resort. Meant for patients in the final stages of organ failure, this can save their life. Some people experience organ failure at a young age that will potentially kill them. Others, may have been diagnosed with a severe disease such as cancer in an organ and without a transplant to the vital organ, they will die. Also another reason for this procedure would be if someone were in a severe accident such as a car accident, leaving them with a damaged or nonfunctioning organ.

There is a good amount of organs that can be transplanted. Most of the vital organs are transplantable. Organs that can be transplanted are the kidneys, pancreas, intestines, liver, heart and lungs. Commonly when a heart or lung is replaces they can be and usually are replaced together. The kidneys and pancreas are another set of organs that tend to be replaced together. Doctors must take many precautionary procedures in order to ensure the organ from the donor matches the recipient. However, organs can only be taken from a matching donor. This means the person donating the organ and the person receiving the organ must have a so-called "match." Usually these matches are determined by blood type, tissue type, and cross matching. Cross matching is looking at certain antibodies in organs to see if the recipient's body will reject the organ or the possibility of infection.

Even with all these matching donors of blood and tissue type, the recipients' body will still recognize the new organ as foreign unless it is from an identical twin. To reduce this risk, doctors often prescribe immunosuppressive drugs. These help work with the recipients' immune system so that it does not attack the new organ. Another option would be to receive a bone marrow transplant on top of organ transplant. The theory is that the white blood cells

produced by the donors' marrow will work with the recipients' natural cells, letting the new organ to be recognized as part of the body.

Organ transplantation is in such demand; it is necessary it be controlled. Typically the UNOS controls the management of the nation's organ transplants under a contract with the federal government. In other countries there is many illegal human organ trades being conducted. Common in China, organs are being harvested from prisoners that were executed rather than form willing donors.

Organ transplantation is a huge advantage in helping save the lives of patients facing the risk of dying from a damaged or failing organ caused by disease, age, or accidents. Though there is a chance of rejection, doctors work together and with the donors and recipients to reduce these risks by finding matches and prescribing medications to allow the organs to be recognized by the immune system. And with today's advances in technology, it is becoming more and more common and safe.

Works Cited

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Annotation		
Focus	1.5	The writer addresses most areas of the prompt, such as the definition and reasons for organ transplantation, but there is no developed explanation of rejection issues. The issue of regulation is mentioned, but needs to be explained.
Reading/Research	1	It is evident that the writer has read information on the topic: • Organ transplantation is meant for patients in the final stages of organ failure. • Another reason for this procedure would be if someone were in a severe accident leaving them with a damaged or nonfunctioning organ. However, the writer does not fully elaborate on the ideas that the research presents.
Controlling Idea	1	The writer attempts to establish a controlling idea in the first sentence, but lacks a clear purpose for the entire essay.
Development	1	The writer offers reasons for organ transplantation, but they are limited to organ failure from disease or accident, with no further explanation.
Organization	1.5	The essay follows a logical structure, including opening, body, and closing paragraphs. Transitions could be included to enhance the flow of ideas between paragraphs.
Conventions	1	Repetitive statements, word choice, and incomplete sentences detract from essay's cohesion. Sources are used without citation.
Content Understanding	1	The writer attempts to include examples and details to address the content, but does not demonstrate a clear understanding. For instance, the opening statement presents faulty logic: Organ transplantation is usually a required operation in order to save the life of a patient with disease or other problems.

This student would benefit from feedback, discussion, and/or instruction in the following areas:

- Elaborating on research and examples to provide more thorough explanations.
- Writing in complete sentences.

Meant for patients in the final stages of organ failure, this can save their life.

More precise word choice.

There is a <u>good</u> amount of organs that can be transplanted.

• Appropriate use parenthetical citations in order to avoid plagiarism.