2019 Arizona CMMRF Update

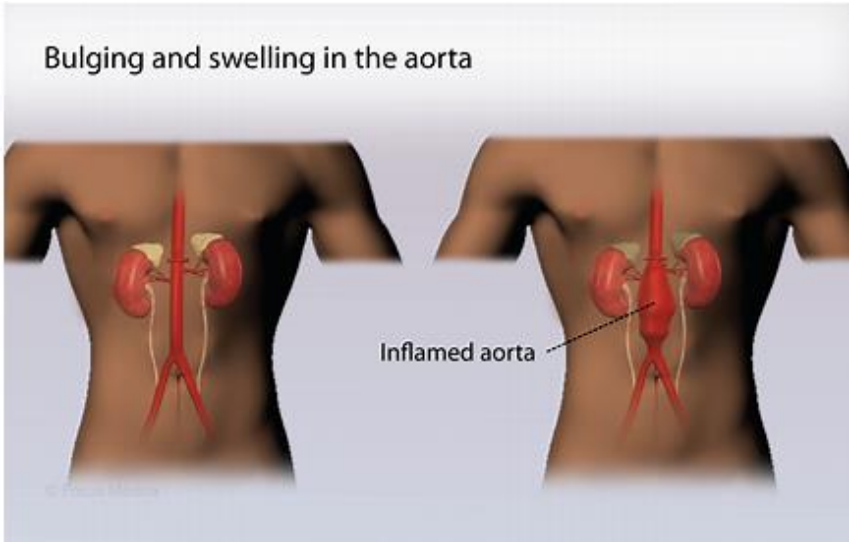
At the Arizona Grand York Rite Session in August 2019, Most Illustrious Companion Gary Wyne gave us an update on the research that our donations to CMMRF support. Gary Wyne is the Executive Secretary of CMMRF and Past Grand Illustrious Grand Master of the Grand Council of Cryptic Masons in Indiana in 2008 and 2009. This is a summary of his comments with added explanations of the technical and biological terms he used to aid in understanding. I extend my appreciation to Illustrious Companion Wyne for sharing a copy of his talking points and giving me permission to use them for the benefit of Arizona Cryptic Masons. I would also like to thank my wife, Julia, for assisting me edit this document.

Donations we give to CMMRF help support research at the Indiana Center for Vascular Biology and Medicine (ICVBM). The lead researcher is Dr. Michael Murphy, MD, who graduated from the Columbia University College of Physicians and Surgeons in 1989. He has over 29 years of diverse experience that includes vascular surgery.

Research by ICVBM improved treatments used by doctors in the following areas that will be explained below: peripheral arterial disease, critical limb ischemia, abdominal aortic aneurysms, cancer, diabetes, congestive heart failure, stroke, arthritis, wound closings, closing techniques used in surgeries, and pancreatitis. About 80% of those attending the 2019 Grand Sessions had experienced at least one of these ailments. We need to help CMMRF press onward through our donations.

First in our discussion are explanations of biological and technical terms to assist in our understanding. The explanations are on my level and not on the level of a doctor or researcher. Discussions about ICVBM Research and CMMRF Donations will follow.

Biological and Technical Terms: An aneurysm is an abnormal bulge in a blood vessel. Aneurysms are classified by their location in the body. The arteries of the brain and heart are the two most common sites of serious aneurysms. The bulge can take two main shapes: 1) Fusiform aneurysms bulge all sides of a blood vessel, or 2) Saccular aneurysms bulge only on one side. The risk of rupture depends on the size of the bulge.



Aortic aneurysms occur in the wall of the aorta that carries oxygen-rich blood from the heart through the abdomen to other parts of the body. A thoracic aortic aneurysm occurs in the part of the aorta that runs through the chest. To the left is a picture of a normal vein and a vein with an aneurysm.

Aortic aneurysms were related to 9,863 deaths in 2014 and 17,215 deaths in the in 2009 in the United States. Source: https://healthtopquestions.com/aortic-aneurysm-causes-symptoms-diagnosis-treatments/

Congestive heart failure does not mean that the heart stops, but that it becomes weaker and cannot pump oxygen rich blood efficiently. The response of the kidneys is to reduce the amount of water and salt removed from the body; thus, fluid begins to be retained in the arms, legs, feet, ankles, and lungs. The body becomes congested.

An ischemia, according to an online dictionary, is an inadequate blood supply to an organ or part of the body, especially the heart muscles.

Peripheral Arterial Disease is the narrowing of arteries going into the limbs (source: https://www.mayoclinic.org/diseases-conditions/peripheral-artery-disease/symptoms-causes/syc-20350557),

Cytokine are substances, such as interferon, interleukin, vitamins, and hormones, that are secreted by the immune system. These substances are small proteins that aid in communication between cells.

Cytotoxic means toxic to living cells.

T lymphocytes, also called T cells, are responsible for fighting diseases. T cells are made by the thymus and reside in the lymph nodes. T cells come in many types with specific functions, including helper T cells. Helper T cells release cytokines. Cytokines stimulate B cells, or B lymphocytes, to form plasma cells. B cells reside in the bone marrow.

Cytotoxic T Cells can kill cancer cells and infected cells.

Auto-immune, according to an online dictionary, is a disease caused by lymphocytes or antibodies attacking naturally present substances in the body.

A stem cell is a type of cell that can transform into other types of cells. Stem cells are found in many tissues. In the bone marrow stem cells produce new red blood cells. The stem cells in bone marrow can be extracted to produce other types of tissue. Source:
https://stemcells.nih.gov/info/basics/1.htm

3D printing is the creation of a physical object by laying down many successive thin layers of material using a three-dimensional digital model as a guide. The process uses a 3D printer. Remember the in Staircase Lecture an explanation of geometry is given, “from a point to a line, from a line to a superfice, and from a superfice to a solid.” A 3D printer uses many superfices that are layered on top of each other to form a solid. (Funny – the word ‘superfice’ is not in either an online dictionary or my paper dictionary! I used a blue lodge ritual book to check the spelling) This passage in the Staircase Lecture allegorically describes my understanding of how a 3D printer works.

Nanotechnology is the working with materials on the near atomic scale to produce structures. The scale of the structures produced is between 1 to 100 nanometers. A nanometer is one billionth of a meter or 3.9 hundred millionths of an inch.
(https://www.cdc.gov/niosh/topics/nanotech/default.html)

ICVBM Research: The primary focus of Illustrious Companion Wyne’s talk focused on the areas of congestive heart failure, abdominal aortic aneurysm, and diabetes.

ICVBM participated in the two trials studying congestive heart failure caused by heart attack and chemotherapy through the Cardiovascular Cell Therapy Research Network

(https://sph.uth.edu/research/centers/ccct/cctrn/about-us.htm). A procedure developed uses a 3D printer to create heart tissue using stem cells for implanting into parts of the heart removed due to damage.

Abdominal aortic aneurysms have been found to be caused by an auto-immune response to proteins in the aorta. The Indiana Center for Vascular Biology and Medicine discovered that bone marrow stem cells can "turn on" immune regulatory cells to prevent aortic aneurysm expansion.

Genetically modified bone marrow can produce special stem cells for creating cells with high levels of interleukin-10. Interleukin-10 is a powerful anti-inflammatory protein. Ways of detecting aneurysms and ways to identify those who are at risk of producing aneurysms are being developed.

The ICVBM worked with Northwestern University to develop nanoparticle technology to stop an immune response that causes aneurysms. Mouse studies demonstrated that chronic inflammation that leads to aneurysms also contributes to muscle wasting and heart disease.

Type 1 diabetes, or Juvenile diabetes, is believed to be an auto-immune disease where rogue cytotoxic T-cells attack the beta cells that are the insulin producing cells of the pancreas, thus leading to diabetes. Research points to defective T-cells. Current research is focusing on these defective T-cells in mouse studies.

CMMRF Donations: Great strides in research and development that affect millions of people have been achieved. The Grand Council continues to sponsor CMMRF funding through a $1 per member per capita assessment. Based on the change in the value of the dollar since the inception of this program, one dollar is no longer a significant amount. We appreciate donations from companions and councils. Although you can donate by going directly to www.cmmrf.org, I recommend you donate through your local council so your council will receive full credit. Either way your donations can be deductible. Make sure you have your secretary or treasurer give you credit for your donations when they send your donations to CMMRF. The CMMRF address is:

Leah Jackson

Cryptic Mason Medical Research Foundation
P.O. Box 1489
Nashville, Indiana 47448-1489

Since 1986 total contributions by all jurisdictions to CMMRF has been $5,937,253.39**.** Arizona contributed $164,615.65, ranking 10th among jurisdictions. In 2018, Arizona**:**

- contributed $3,494.50,
- $584 of this was through the $1 per capita assessments,
- the average was $6.10 per member,
- and ranked 17th among the jurisdictions we track.

We request that each council donate either the price one Big Mac Attack per member or the equivalent of one shekel of silver (about $12 to $14) per member to CMMRF annually. You can feel you are a part of the success of research at ICVBM through your donations.

Thank you,
Frank Edens
Arizona CMMRF Chairman
8/27/2019