

Book Reviews

Sharks Get Cancer, Mole Rats Don't: How Animals Could Hold the Key to Unlocking Cancer Immunity in Humans, by James S. Welsh, M.D., softcover, 1501 pp, \$11.32, ISBN 9781633881549, Amherst, New York, Prometheus Books, 2016.

Dr. James S. Welsh is a clinical researcher and director of oncology at Stritch School of Medicine at Loyola University, Chicago. He has provided a fascinating overview of cancer biology, immunology, and treatment that even a layman can enjoy and appreciate.

The book begins with a patient treated with localized radiation for a melanoma metastasis to the femur. All of the patient's cancerous lesions resolved miraculously! The localized treatment exhibited systemic effects! Another patient with metastatic esophageal cancer received palliative radiation to relieve obstruction. The patient was quickly able to swallow food and epigastric pain resolved. He was alive and in complete remission five years later!

These two cases illustrate the abscopal effect first described in 1953 by Dr. R. H. Mole. This effect occurs distant from the targeted area of treatment. Dr. Welsh began to study how one's body recognizes self from non-self, and how the immune system fights cancer cells.

He describes contagious nerve sheath tumors in the Tasmanian devil, a predatory marsupial, which are invariably fatal and which may eventually render the species extinct. This is contrasted with a contagious canine cancer that is hardly ever fatal and brings about life-long immunity after recovery from the initial episode.

Dr. Welsh also documents that sharks do get cancer (including excellent photographs), debunking the error-filled books of 1992 and 1996, which touted the wonders of taking shark cartilage, much like the

snake-oil salesmen of long ago.

He goes on to describe certain animals that never get cancer, including the naked mole rat, the blind mole rat, and a mouse discovered in 1999 that has an autosomal dominant mutation rendering it impervious to cancer.

Humans with Laron Syndrome have dwarfism due to an inability to respond to growth hormone, which renders them cancer-free.

Transplant recipients have succumbed to cancer cells not known to be present in organs from donors who were clinically cancer-free at the time of surgery. AIDS patients frequently develop cancers due to immunosuppression.

There are interesting discussions about the development of smallpox vaccine, BCG immunotherapy for bladder cancer, and immune-modulating monoclonal antibody treatment.

About 40 percent of the U.S. population will develop cancer at some point. This book may stimulate further research that will lead to a cure.

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A Surgeon's Heart: the Challenge, by Robert W. Sewell, M.D., softcover, 464 pp, \$17.95, ISBN-13: 978-0990405160, Robert Sewell, M.D., 2016.

This is the fifth in a series of novels about protagonist Dr. Jack Roberts, a pediatric cardiac surgeon, a likable character with some heroic traits. His immediate family members are also crucial to the complex story line.

Dr. Roberts is unhappy with what has happened to the profession he loves, but he is unusual in that he goes to great lengths to do something about it. This gives the book a hopeful and inspiring feel.

If Dr. Sewell's primary goal with

this book and series is to provide a restored vision of medicine as a heroic profession, he has done a great job. Dr. Jack Roberts is really someone special, who is not portrayed as simply a member of a team, but as an inspirational and visionary leader, who is also very human. Perhaps what I most enjoyed about this book is the creativity: the building of something new and wonderful, and the celebration of the good that can be done when the private sector is unleashed. There were a number of other interesting characters to round out the story, even including a dictator and his wife.

The book provides a much-needed counterpoint to what people are usually hearing about doctors these days. It may also provide people outside of the medical field with some insight into the struggles doctors face, although Dr. Jack Roberts and his wife do come across as living privileged lives. The younger Dr. Roberts is probably more relatable to many, living in an apartment with his wife and little children. The book might even help people imagine what might be possible if the weight of excessive regulation is removed from the medical field!

There are some side plots that, to me, seemed a bit contrived—a melodramatic one involving other surgeons, and a foiled terrorist scheme. And I think it could have done without references to current U.S. politicians. But on the whole it's a good and informative read.

I was already a fan of Dr. Sewell's non-fiction writing, which is outstanding. I look forward to the next in the series, and I plan to go back and finish the second volume and read the third and fourth volumes.

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