

Environmental Scan of Web-based Consumer Information on the Risk of HPV-Related Diseases in Patients with Systemic Lupus Erythematosus

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Background

- Lupus is an autoimmune disease that can cause joint pain, fever, skin rashes and organ damage. There's currently no cure for lupus and it requires life-long management. Lupus is most commonly seen in women — typically between the ages of 15 and 45.¹
- Patients with an autoimmune disease typically receive intense immunosuppressant drugs such as steroids, chemotherapy or biological treatments which interferes with the bodies natural ability to fight infections
- Human papillomavirus (HPV) infections are more common in lupus patients when compared to the healthy population and are at a higher risk of HPV related diseases, specifically cervical, oral, and anal cancers, during or after treatment for the autoimmune disease.²
- The internet helps support and educate patients. It is the second most consulted source next to physicians. Google is the preferred search engine.³

Objective

Assess the educational content, intended for patients, available on the internet about both HPV and lupus. Based on the data collected, information about treatment, prevention and management of cervical cancer, HPV and lupus can be created to better suit the patient demographic.

Methods

- An environmental scan of currently available Systemic Lupus Erythematosus and HPV educational information on Google was performed.
- The terms “Systemic Lupus Erythematosus”, “Lupus”, “Human Papilloma Virus” and “HPV” were key works used in the Google search bar to generate relevant results. The first one hundred results were then reviewed by two independent investigators to collect data based on:
 - If the source included both lupus and HPV
 - The source domain (.com, .org, .net, .edu, .gov, or region domains like .uk, .scot or .kr)
 - Type of webpage (organization, blog, social media, newspaper, business, forum, wiki or e-commerce)
 - Type of content provided (educational, news, social media post, white paper or research).
 - Who the target audience was (patients, general public or healthcare providers/physicians).
 - If the source was for profit: journals or websites provide education information or medical news but includes outside advertisements.
 - Language, the last year of update and the country of origin.

Conclusions

- Most of the sources available on google for both Lupus and HPV are not for patient educational purposes, therefor content needs to be created for this demographic.
- Most of the relevant sources have a .com domain
- Most of the relevant sources are for profit

Future Activities

- The second half of this environmental scan involves two independent investigators assessing the 17 relevant google sources based on:
 - Included definitions for both HPV and Lupus
 - Information about prevention, benefits versus harms of treatment, and management of the diseases
 - Completeness and accuracy of the information based on scientific evidence
 - Information presented at a 6th grade reading level which is evaluated using the free SMOG readability formula
 - Technical aspects of the source
 - Site design

Expected Conclusions:

- Most of the sources provide clear, accurate definitions for HPV and Lupus
- Most of the sources explain treatment options, the risks associated with them and what patients can do to manage or prevent the diseases.
- Most of the sources are fit for the general public to read and understand at a 6th grade reading level
- Most of the source's design and technical aspects are easy to use and function

References

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- Improving health outcomes with better patient understanding and education. National Center for Biomedical Information. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3270921/> Published October 2010. Accessed July 24, 2014.

Classifying Websites.

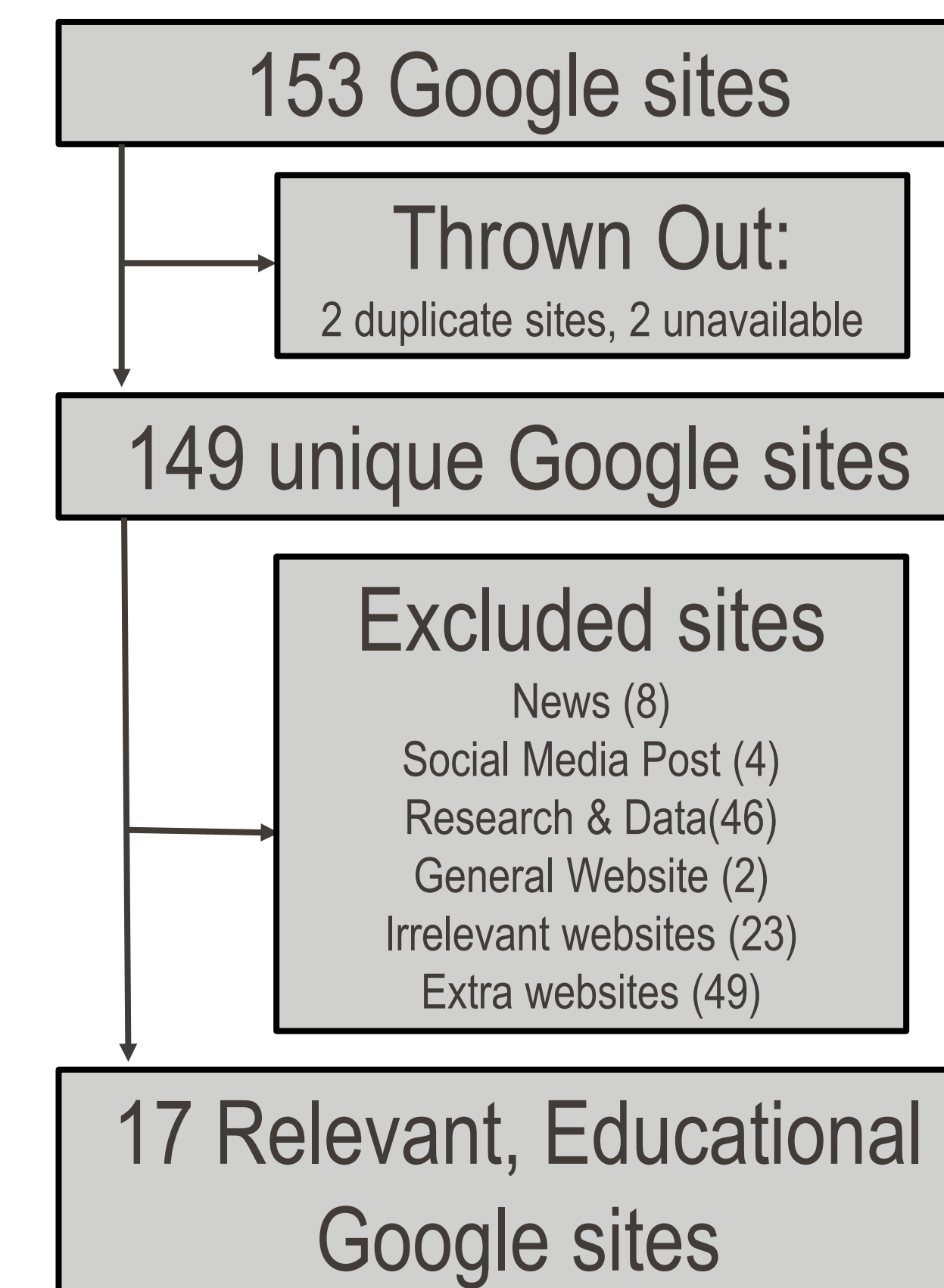


Fig. 3

Relevant Website's Funding

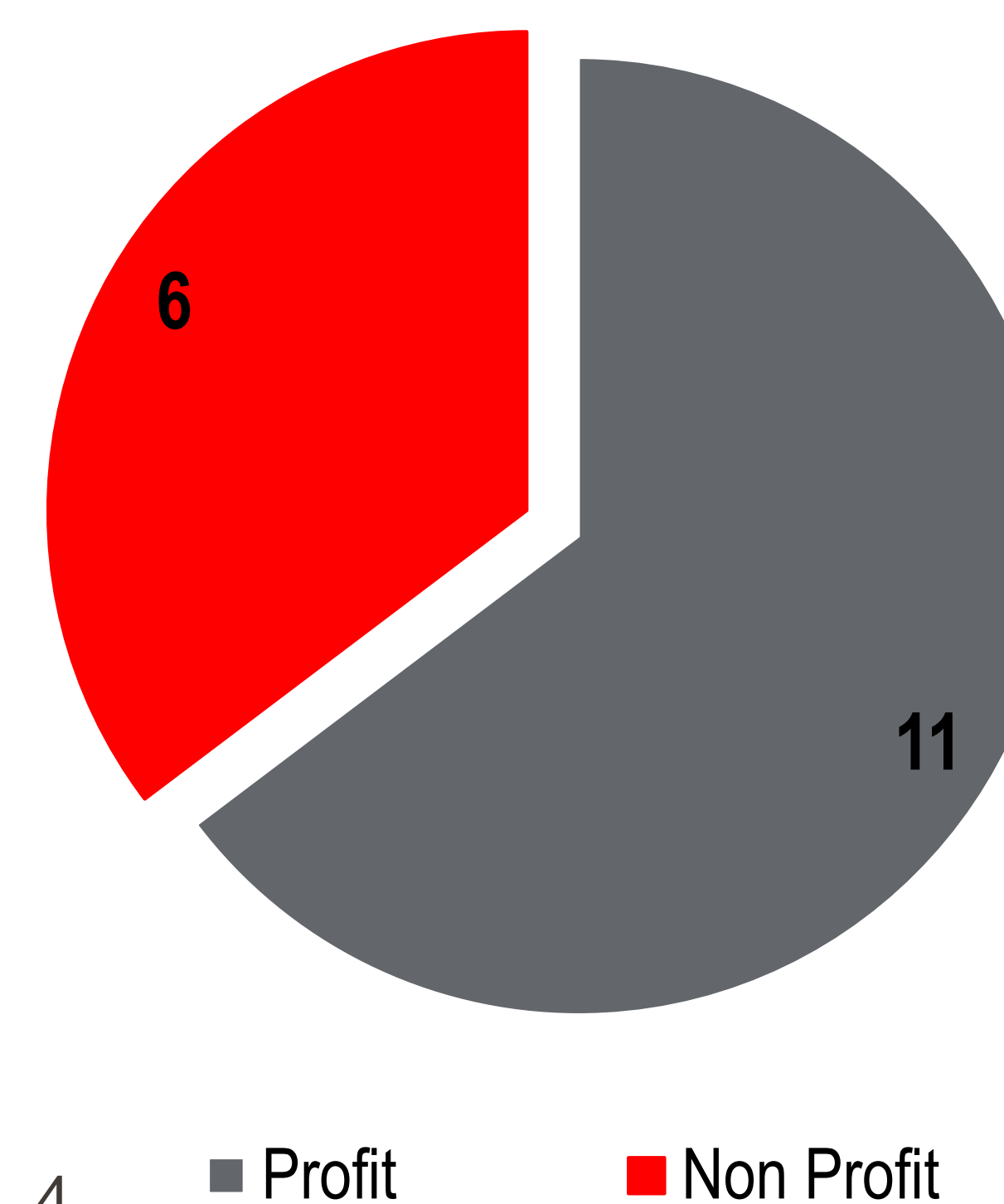


Fig. 4

Results

- 17 Google sources provided educational content related to both HPV and Lupus intended for patients
- Of the 17 sources, 12 had the domain “.com”, 4 were “.org”, 1 was “.edu” and, 1 was “.gov”
- 11 of the relevant 17 sources were for profit

Funding

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Relationship Between Autoimmunity & HPV

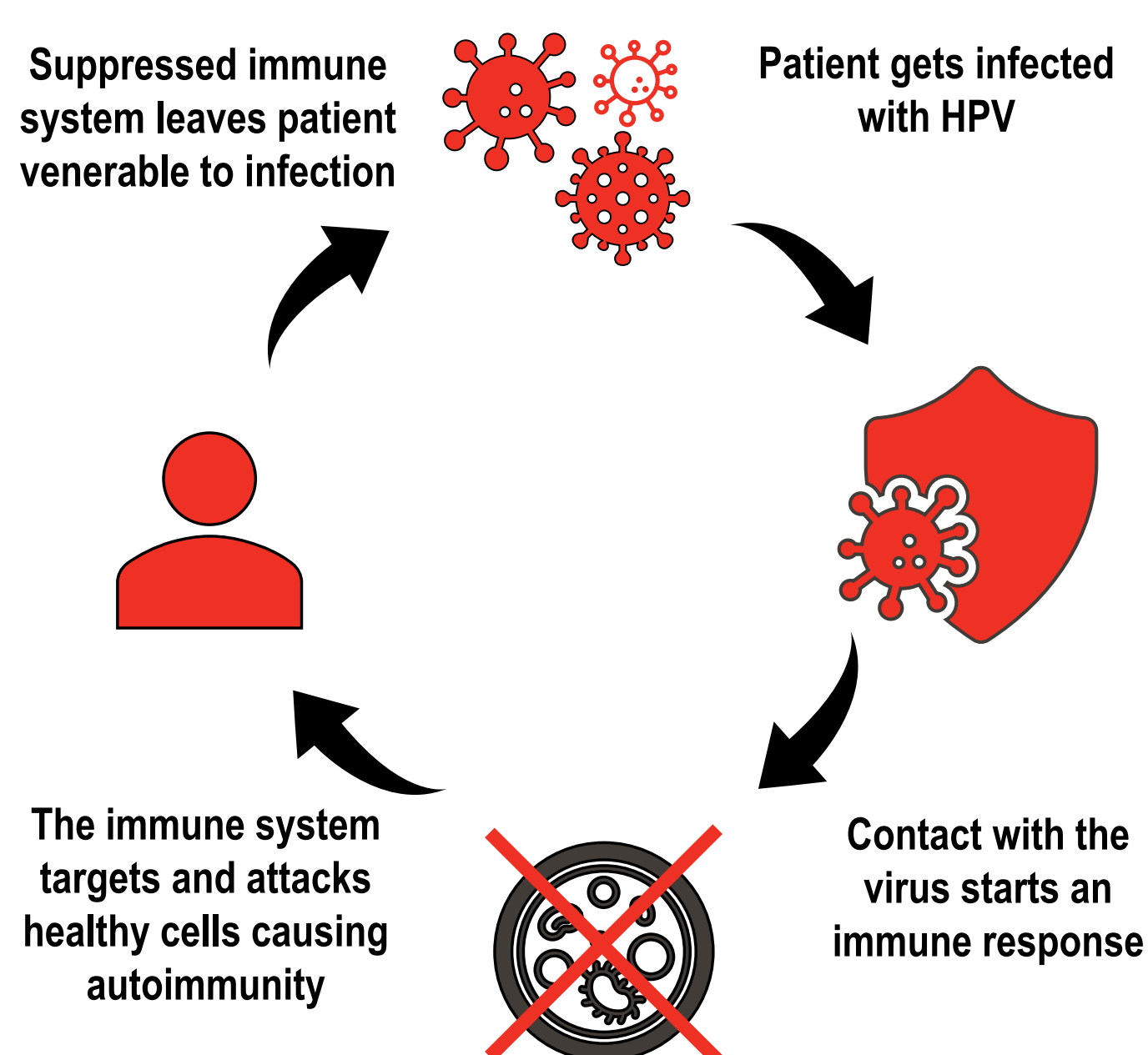


Fig. 1 Why patients with an autoimmune disease, like lupus, who receive immune suppressing medication are more susceptible to Human Papilloma Virus infections due to weakened immune systems.

Example Screenshots of Domains

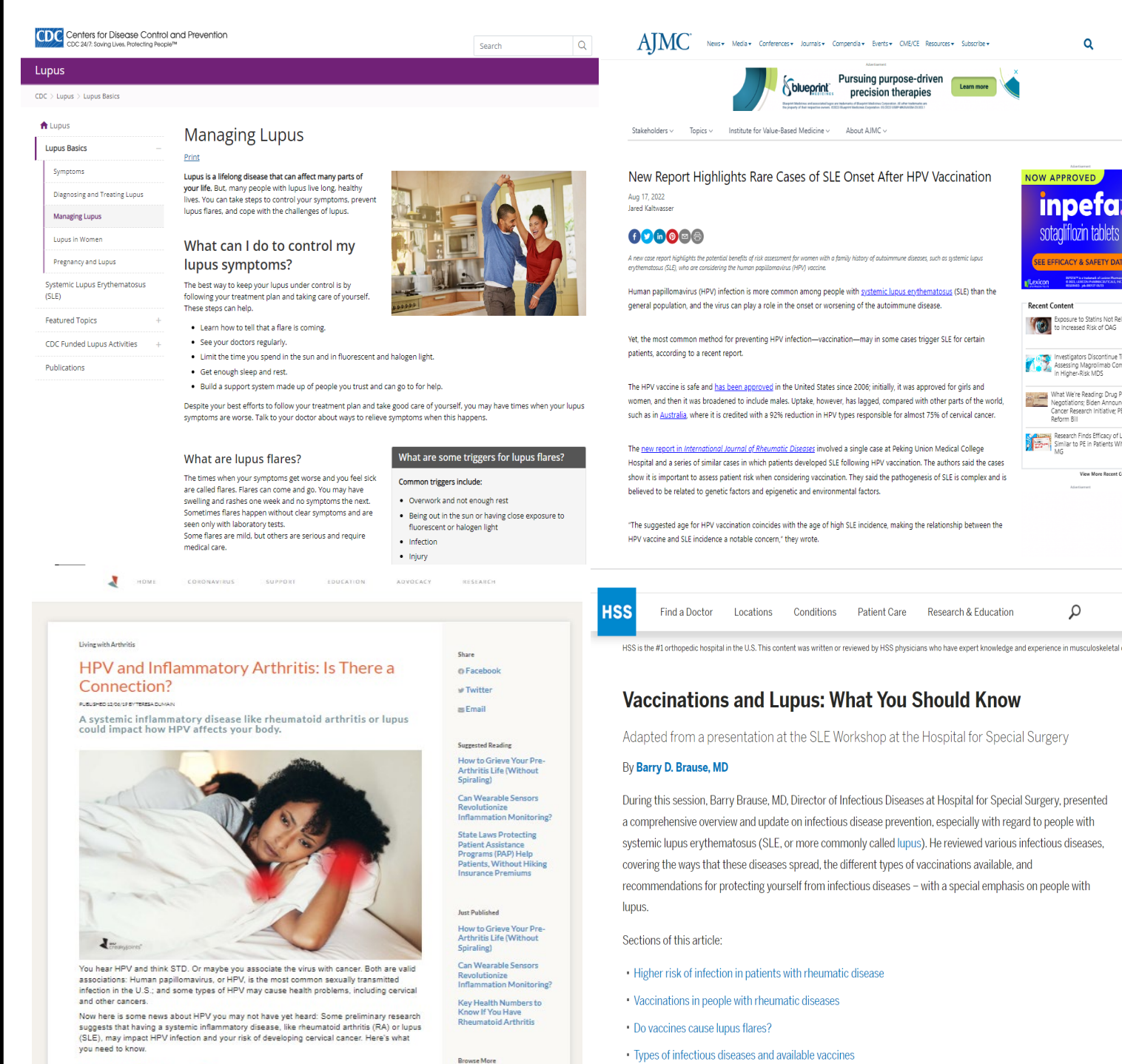


Fig. 2 Top left .gov, Top right .com, Bottom left .org Bottom right .edu