Your roommate woke up with a headache on Sunday morning and decided to ask Dr Google what it can be. He tested positive via Google to: nausea: yes, vomiting: yes; lethargy, yes; increased thirst, yes; dizziness: yes! Did he have a head trauma yesterday? Wow! He was so drunk when he came home after the party that he cannot remember, but – wait! Here is another symptom: memory loss!

Simple hangover? Hmmm… maybe – but it could also be early onset dementia or meningitis or ruptured brain aneurysm or a brain tumor or vasculitis… Should he call the ambulance?

Seems that your roommate just joined the club of people whose fear of the unknown worsens as they seek information about particular real or imagined symptoms on the Internet. People having in fact symptoms of the cyberchondria.

SJSM students decided to conduct a research on this new disorder and if you click on the poster - you will see the results presented on the Science day:

**The Effects of Health Related Internet Searches on Patient Anxiety, Patient Health and the Development of Cyberchondria**
Anjelika Evangelopoulos, Chasity Serrano, Natasha Turner and Christine Janke
Mentor: Dr. Rana Zeine
The Effects of Health Related Internet Searches on Patient Anxiety
Patient Health and the Development of Cyberchondria

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Introduction
"Cyberchondria" is the escalation of anxiety in individuals who search the internet to get the answers to their health-related questions with higher frequency and for longer periods of time. Because online information is not necessarily accurate, complete or of a high quality, patients may formulate improbable and alarming self-diagnoses. Thus the risks of misdiagnosis, anxiety, and hypochondria are substantial. "Cyberchondriacs" may experience "post-search-relief" of their anxiety or those who experience high levels of post-search tension are more likely to visit their doctors. This study probes gender differences in the use of and the effect of internet searching for health-related information.

Methods
An online cross-sectional analysis was conducted by using an anonymous survey administered by online survey software SurveyMonkey: http://www.surveymonkey.com. The participants completed 30 items questionnaire on their Internet usage for health care advice. The questions were either modified from previously published studies or created by the authors. The results were analyzed using Chi-squared and/or Post-hoc analysis. Descriptive statistical analysis was also performed.

Results
Demographic: there were 171 literate responders, mostly from North America, some from Europe, Australasia, and the Middle East. There was a large number of students, retirees, and health care workers. The majority were female (58%). The age distribution was: under 20 (23%), 21-30 (26%), 31-40 (24%), 41-50 (17%), 51-60 (8%), over 60 (8%).

164 participants disclosed having a medical history, namely:
- Mental health: 37%
- Diabetes: 8%
- Asthma/respiratory: 11%
- Cancer: 12%
- Other: 2%

Many of the participants did not know if they had any chronic disease. 54.3% reported having one or more of the disorders listed. 77.5% had recent health issues. 17.6% did not know it, 1.78% did not know, and 2.94% preferred not to answer. Out of 166 responses about serious medical emergency that required health care provider's help within the last 24 months, 51.9% responded yes, 76.92% responded no and 1.18% preferred not to answer.

Survey: The primary source for health-related advice was a health care provider. Internet was also significant source, particularly for the females (Fig.1). The majority of participants have pre-diagnosed themselves using information found on the internet. There was no significant gender difference in the pre-diagnosing, but it appears that women were more likely to use online resources in order to pre-diagnose (p=0.0751: Fig. 2).

Both gender equally sought further health advice from a physician after Internet self-diagnosing themselves (Fig. 3). The majority claims that the physician later confirmed their self-diagnosis. There was no difference between men and women on whether their self-diagnosis was correct and verified (Fig. 4).

Roughly half the men and half the women were concerned their doctors did not correctly diagnose them when no illness was found; there were no gender differences in those concerns (Fig. 5). Seems that females exclusively visited doctors more than 10 times within past year, while males tend to have fewer or no doctor visits (p=0.020; X2; Fig 5).

Females were more likely to feel distress, anxiety or depression regarding their health (p=0.0424; X2; Fig. 7). Searching the internet for health and medical information made a majority of survey participants more cautious about their health (Fig. 8).

Discussion
A vast majority of Internet users have searched for a health-related diagnosis. However, the internet is not shown to be the primary source for health advice and hypochondria does not exist. Men were less likely to trust their internet diagnosis than women. Women were more than twice as likely to choose the Internet as their primary source of health advice and men were twice as likely to turn to family members.

Upon Internet self-diagnosing, 74% of females and 64% of males turned to a family member or a healthcare provider; those who did not (21% of females, 28% of males) that they have successfully addressed their own health problem(s) based on their Internet-guided self-diagnosis.

"Cyberchondria" was induced by a greater extent in females compared to males.

"Post-search-relief" was reported in more than half of both females and males.

Conclusions and recommendations
Our results confirmed that the Internet plays an important role in the patient’s life both leading up to the diagnosis and post-diagnosis. The Internet as a self-diagnostic screening method is quite effective, and could be used to cut down healthcare costs and patients’ wait times. However, health related online advice can have a positive or negative effect on a patient thus stressing the importance of an open line of communication with a healthcare provider.

References

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