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Prevalence of Interacting Herbal and Alternative Medicine Product Use in Cancer Patients at a Single Infusion Center

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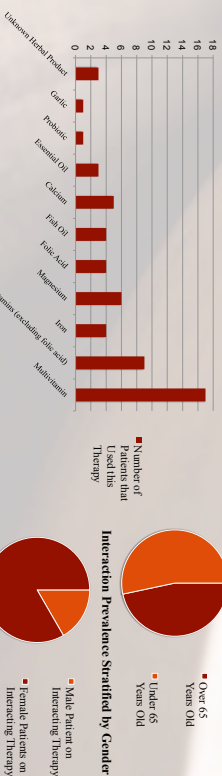
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Background

- The U.S. estimated expenditures for alternative medicine services increased almost 50% between 1990 and 1997¹
- In 2000, a questionnaire of over 3000 people found that there were drastic increases found in the costs of complementary and alternative medicines (CAM)¹
- Americans spent four times as much on alternative therapies than the public contribution to all pharmaceuticals since 1993¹
- There have been various surveys that have shown that as many as 84% of U.S. cancer patients have used CAM therapies after their diagnosis¹
- The exact use of these therapies may be under or over estimated due to patients feeling ashamed to admit their use, or patients exaggerating their use¹
- Studies have shown that most cancer patients combine their conventional therapy with CAM use, rather than completely replacing it¹
- Due to the narrow therapeutic window of anticancer drugs, CAM use could lead to dramatic consequences, such as high levels of toxicity or decreased efficacy¹
- CAM is known to contain several constituents with unknown pharmacological capacities which means that the effects may be totally unpredictable²
- Physician knowledge about patient use of CAM as well as potential interactions may be limited, therefore having pharmacist involvement is important^{2,3}

Methods

- Single-center, retrospective, non-interventional study. IRB approved study
- Subjects were identified through Intermountain's Enterprise Data Warehouse (EDW) with ICD-9 or ICD-10 codes, where applicable, for chemotherapeutic administration to be considered for evaluation
- Inclusion criteria for the study were those receiving chemotherapy from January 30th 2014 – October 1st 2015
- Exclusion criteria includes patients less than 18 years of age and those receiving chemotherapy for reasons other than cancer therapy
- The type of health care professional collecting the medication reconciliation was recorded to help identify confounder trends
- This study reviewed patient medication reconciliation records in relation to the type of chemotherapy regimen and various cancer diagnosis
- Results were analyzed using descriptive statistics to calculate existing relationships between parameters such as baseline characteristics, diagnoses, and Complementary/Alternative Medicine (CAM) use
- Data trends were statistically analyzed using the Fischer's Exact Test



Results

- 43 out of the 94 patients that qualified for this study had recorded CAM therapy
- A total of 5 out of the 94 patients evaluated were taking interacting CAM therapy
- In our study 43 of the patients were female and 53 were male
- CAM therapy was used in 22 female patients and 20 male patients
- 4 of the 5 interactions found were in the 43 total female patients with recorded CAM use
- Each patient that was recorded as taking some sort of CAM therapy used multiple agents, as 84 supplements and/or herbal products were taken out of the 43 that used CAM
- 15 patients were taking herbal therapy and 26 patients took vitamins
- 8.8% of patients under 65 years of age used interacting CAM therapy and 7.7% patients over the age of 65 used interacting alternative CAM therapy

Conclusion

- Many patients taking CAM did not have significant interactions associated with their use
 - Almost half of the patients analyzed used CAM showing that CAM therapy is fairly prevalent among this population
 - The top 3 CAM therapies included multivitamins, B vitamins and Magnesium supplementation
 - Most CAM therapy use was seen in those under 65 years old
 - 6.4% of those therapies interact with concomitant chemotherapy
 - Half of the interactions seen were in patients diagnosed with breast cancer, lung cancer and colon cancer
 - Though there were less females included in the study, more interactions were seen, though number of supplements taken between genders was near even
- Future Implications**
- Larger studies need to be conducted comparing disease outcomes and survival comparing those that elect to take CAM compared to those that are treated traditionally
 - More data would allow triage protocol to be developed to help screen for more high risk patients to allocate time for education for patients about the risks of some CAM therapy
 - The vast majority of medication reconciliation collection was conducted by nursing staff – future studies should run analysis to see if there is a significant difference in thorough collection technique between different professionals, such as pharmacists versus nurses

References and Disclosures

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- Raquel Barrack: Nothing to disclose
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- For more information about this study feel free to contact Raquel Barrack (rbarrack@student.roseman.edu) or Megan Corsi (mcorsi@student.roseman.edu) directly.