Paper Number: 315 Date Submitted: 10/12/2021 Status: Submitted

Primary Presenter

Registrant ID: 7074204 First Name: Alan Last Name: Blum Credentials/Degrees: MD, DSc [Hon] Organization: University of Alabama School of Medicine Title: Professor, Family Medicine;Director, Center for the Study of Tobacco and Society Address1: 26 Pinehurst Dr Address2: City: Tuscaloosa State: AL Zip Code: 35401 Country: United States Phone: 2057999478 Fax: 2053482889 E-mail: ablum@ua.edu Biogenety Since founding the first physicians' anti specking estivist ergenization Degrees

Biography Since founding the first physicians' anti-smoking activist organization Doctors Ought to Care (DOC) in 1977, Dr. Blum has given over 2000 invited presentations on tobacco and has published over 100 peer-reviewed articles. As editor of the Medical Journal of Australia and the New York State Journal of Medicine, he produced the first theme issues on the world tobacco pandemic at any journal. In 1988 he received the Surgeon General's Medallion from Dr. C. Everett Koop, who wrote, "Dr. Blum has done more against smoking than anyone." In 2006 Amherst College awarded him an honorary Doctor of Science for his career-long effort to combat the tobacco industry. Since 1998, he has served as Professor of Family Medicine and Director of the Center for the Study of Tobacco and Society (csts.ua.edu), the most comprehensive archive of original documents and ephemera of the tobacco industry and the anti-smoking movement throughout the past century. **Have you ever been employed by or received any funding from the tobacco industry (including manufacturers of tobacco products, the Tobacco Institute, law firms, or other interests representing tobacco companies to conduct research or provide consultation), the pharmaceutical industry (including producers of smoking cessation products), or another for-profit healthcare company that sells products or conducts research relevant to tobacco control policies (including e-cigarette manufacturers or marketing companies)?:: I have not received any funding from these entities.**

Please provide additional detail explaining the funding received and your relationship with the entity. If your abstract is accepted, you will be required to complete and sign a disclosure of conflicts of interest form providing this detail and more of these relationships.:

Co-Presenter 1

Registrant ID 7074213 First Name: Joshua Last Name: Kelley Credentials/Degrees: High School Diploma Organization: University of Alabama Title: Catherine J. Randall Research Scholar Address1: 45 Indian Pine Trace E Address2: City: Gadsden State: AL Zip Code: 35901 Country: United States Phone: 256-393-9697E-mail: jbkelly@crimson.ua.eduBio Joshua Kelley is in his junior year at the University of Alabama, where he is a member of the Randall Research Scholars Program.

Have you ever been employed by or received any funding from the tobacco industry (including manufacturers of tobacco products, the Tobacco Institute, law firms, or other interests representing tobacco companies to conduct research or provide consultation), the pharmaceutical industry (including producers of smoking cessation products), or another for-profit healthcare company that sells products or conducts research relevant to tobacco control policies (including e-cigarette manufacturers or marketing companies)?:: I have not received any funding from these entities.

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Co-Presenter 2

Registrant ID 7074338 First Name: Saunjoo Last Name: Yoon Credentials/Degrees: PhD,RN Organization: University of Florida College of Nursing Title: Associate Professor Address1: 1225 Center Drive Address2: City: Gainesville State: FL Zip Code: 32610-6418 Country: United States Phone: 3522736418 E-mail: yoon@ufl.edu

Bio Dr. Yoon teaches clinical and didactic nursing courses for undergraduate and accelerated nursing students at the University of Florida College of Nursing. She also mentors doctoral students. Dr. Yoon's research areas include palliative care, oncology, symptom management, and complementary therapies. Dr. Yoon focuses on symptom management of adult cancer populations, with particular interest in managing symptoms using complementary therapies to improve patient outcomes and quality of life after treatment. She has completed studies on the use of dietary supplements to manage chronic pain and a feasibility study to improve appetite and slow weight loss among adults with cancers of the GI tract. Other areas of interest include symptom management of chronic conditions such as sickle cell disease, irritable bowel syndrome and ovarian cancer. Her many honors include the University of Florida Health Cancer Center Celebration of Excellence Award and the University of Florida Research Foundation Professorship Award.

Have you ever been employed by or received any funding from the tobacco industry (including manufacturers of tobacco products, the Tobacco Institute, law firms, or other interests representing tobacco companies to conduct research or provide consultation), the pharmaceutical industry (including producers of smoking cessation products), or another for-profit healthcare company that sells products or conducts research relevant to tobacco control policies (including e-cigarette manufacturers or marketing companies)?:: I have not received any funding from these entities.

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Session Information

Poster Session: Panel Presentation (75 minutes): Yes Individual Presentation (20 minutes): Yes Session Title: What haven't we been teaching the public about the effects of cigarette smoking? Session Abstract: please provide a brief (500 words or less) description of this proposed session. Please note that if your abstract is accepted this description may be published in meeting materials as is, or may be edited for clarity or brevity.: Although virtually all physicians and patients alike know that cigarette smoking is the leading avoidable cause of lung cancer, heart disease, and emphysema, smoking's adverse effects on the musculoskeletal system are not generally appreciated by health professionals, employers, or the public at large. Cigarette smoking damages bone, cartilage, muscle, soft tissue, and the intervertebral discs. Back pain is the fourth most common condition for which men and women seek medical attention, and cigarette smoking has a debilitating impact on the back. Yet this information is seldom included in teaching medical students strategies for educating patients about smoking. This illustrated presentation summarizes the studies on the impact of cigarette smoking on components of the musculoskeletal system and explains the physiologic mechanisms that are believed responsible for these adverse health effects. Using the online database PubMed, we identified and reviewed articles on the impact of cigarette smoking on the musculoskeletal system. The most comprehensive review of this subject, authored by AL-Bashaireh, Haddad, Yoon and colleagues in 2018 in the Journal of Environmental and Public Health, cites 258 references. Key findings include the following: Cigarette smoking increases the lifetime risk of osteoporosis, lumbar disk degeneration, musculoskeletal pain, the intensity of pain, and impairment of bone and wound healing. Smoking has been linked not only with increased back pain but also decreased muscular strength. It can decrease bone mineral density, which increases the risk of fractures. Muscles and soft tissue are deprived of oxygen due to the hydrogen cyanide and carbon monoxide in cigarette smoke. Nicotine damages the intervertebral discs. Smoking also causes peripheral artery disease, increasing the risk of amputation of toes and lower limbs. Bones are a common site of lung cancer metastasis. The goal of this project has been to produce a presentation for medical students and a handout for health professionals to discuss and give to their patients. Supporting session documentation (OPTIONAL): If you have additional documentation that you believe is critical for reviewers to have in order to evaluate your submission (i.e. journal article, poster design), you may choose to upload that document here. (Word, PDF, .jpeg, or Excel files may be

uploaded.: 305414-2-80782-975884eb-1ec7-4747-8162-80e43eeabed5.docx

Learning Objective #1: As a result of attending this presentation, participants will be able to list three adverse health effects of smoking on bones.

Learning Objective #2: Participants will be able to describe the pathologic process by which smoking can cause intervertebral disc degeneration.

Learning Objective #3: Participants will be able to describe the pathologic process by which smoking impedes the healing of soft tissue wounds.