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Representative Tom Brinkman, Chairman
Commerce and Labor Committee
Ohio House of Representatives
3215 Hardisty Avenue
Cincinnati, OH 45208

Dear Chairman Brinkman and Members of the Commerce and Labor Committee:
I am writing to support Ohio House Bill Number 230, sponsored by Representative Courtney Combs of Hamilton.

Please allow a brief introduction to Electromagnetic Radiation, similar to what my four children learned in public schools. Electromagnetic Radiation is a wave in space having electric and magnetic components and is divided into somewhat arbitrary categories based on the frequency of the wave. We know them as a spectrum listed in order of increasing frequency as radio waves, microwaves, terahertz and infrared radiation, visible light, ultraviolet radiation, X-rays, and gamma rays. Natural and manmade forms can be both extremely beneficial and extremely dangerous. As a practicing physician of Diagnostic Radiology, I am keenly aware of the wonderful and exciting applications of electromagnetic radiation for diagnosis and treatment in daily practice, but I must also be ever diligent to limit exposure to patients and medical personnel due to the ionizing effects of radiation and risk of skin damage, cancer development and mutations in early pregnancy. Limiting exposure is especially important in the Pediatric population because of greater sensitivity and cumulative lifetime effects.


The proposed bill will prohibit tanning parlors from exposing children younger than 18 to the dangers of Ultraviolet Radiation, except under special circumstances. As you can see from the spectrum, UV Radiation is higher frequency than visible light but lower than X-ray radiation. Our sun emits UV radiation subdivided into UV A (400 – 320 nanometers), UV B (300 – 280 nm) and UV C (280 - 200 nm). Luckily the Earth's atmosphere filters the more harmful rays so that 99 % reaching our exposed skin is UV A. Higher frequency radiation contains greater

energy and ionizing (damaging DNA) effects. Tanning beds typically emit 95 % UV A and a range of 4 to 8 %UV B radiation and at higher intensity.

The medical profession knows that Ultraviolet Radiation causes skin cancer, just like X-rays and gamma rays are carcinogenic deeper throughout the body (breast, lung, thyroid, bone marrow, etc.). We also know to limit exposure early in life; otherwise there is increased incidence and earlier onset of disease, not to mention premature death and greater costs.

It seems counter productive for the government and medical profession to encourage sun protection with lotions and clothing, especially for children, but allow a very high dose with more harmful radiation from tanning beds. Indeed, 20 minutes in a tanning bed is equivalent to 5 hours of sun exposure, and I suspect none of the patrons would lessen the effects of a costly session by also wearing SPF 50 lotion. The rates of skin cancer have become alarming. The lifetime expectancy of the deadly melanoma has increased from 1 in 1500 in the 1950's, to 1 in 200 in year 2000 and now is 1 in 59. It is also estimated that 20 % of today's children will develop a skin cancer during their lifetime. I feel it is time we protected the children with more than sun tan lotion. I urge you to support and pass House Bill 230.

Thank you,

A handwritten signature in black ink that reads "Bradford Woodall MD". The signature is written in a cursive, flowing style.

Bradford Woodall, MD