

Response to letter to the editor

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Fluoroscopic and ultrasound guidance for injections in the musculoskeletal system. In a perfect world, all musculoskeletal injections that could be effectively done under ultrasound guidance would be done under sonography rather than fluoroscopy because of the lack of ionizing radiation. But the world we live in is not perfect. This is recognized in the wording of the ALARA principle as defined in Title 10, Section 20.1003, of the Code of Federal Regulations USNRC (10 CFR 20.1003): “ALARA is an acronym for “as low as (is) reasonably achievable”, which means making every *reasonable* effort to maintain exposures to ionizing radiation as far below the dose limits as *practical*, consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations...” [1]. This is also highlighted in the wording of the directive issued by the European Atomic Agency that each medical exposure should “take into account the efficacy, benefits and risks of AVAILABLE alternative techniques having the same objective but involving no or less exposure to ionizing radiation” [2]. From a population health perspective, using fluoroscopic guidance is a reasonable alternative to sonographic guidance when ultrasound is not available. That is, it

is better in our opinion to deliver timely care to a larger segment of the population using low radiation from fluoroscopy in some patients. In fact, using both ultrasound and fluoroscopy resources is desirable given the large population of pain patients that require musculoskeletal injections. Perhaps the discussion should rather revolve around improving our ability to route patients to ultrasound if they are young and the injection involves a central structure, and route older patients for appendicular injection to fluoroscopy if ultrasound is not available. Not delivering adequate volume of timely care because of small appendicular radiation dose from fluoroscopy is unwise from a population perspective in the context of limited resources. Doing all cases under ultrasound is a nice idea in the world of utopia, but in reality this approach may lead to patients suffering on a waiting list.

References

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