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In response to leung

Pierfrancesco Franco, Valentina Tesio, Lorys Castelli

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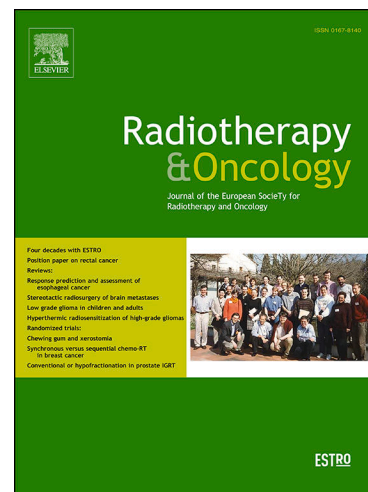
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## Title page

### In response to Leung

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We would like to thank Dr Leung for his appreciation on our manuscript exploring the role of personality traits on the professional quality of life of radiation oncologists, with a targeted focus on alexithymia and empathy [1,2]. Indeed, with our study we tried to provide insights on inherent individual factors having an impact on the well-being at work in radiation oncology. As pointed out by Dr Leung, professional satisfaction is a multifactorial set of instances pertinent to individual, environmental and psychological aspects of an individual at work. In our study, we focused on personality constructs hypothesizing that they may play a crucial role in the relationship between physician and patient, thus contributing to its effectiveness and fulfillingness [3]. As suggested by theories of emotional embodiment, a person is requested to be capable of recalling the relevant components of other's emotion to understand other peoples' feelings. This usually includes somatic, visceral and motor elements. In this way, the emotions are 'embodied'. As per embodied simulation theories, the affective embodiment has an influence on the observer's mind and determines a matching emotion, thus providing a direct way for emotional understanding [4]. Cognitive-behavioral theories, conversely, stress the importance of the cognitive interpretation of the emotions.

These aspects can be highly relevant in terms of doctor-patient relationship and deficits in emotional processing by a healthcare professional may lead to tangible repercussions. In this sense, alexithymia, one of the constructs we addressed in our study, can be exemplifying. Alexithymia is presently considered as a stable personality feature, expressed with variable intensity in the general population, having a point prevalence around 10% [5]. The construct of alexithymia includes multiple salient features, such as a) difficulty in identifying emotions; b) difficulty in describing and verbalizing emotions; c) difficulty in distinguishing between feelings and bodily sensations of emotional arousal; d) constrictive imaginative processes as evidenced by a paucity of fantasies; e) externally oriented

thinking style, with a tendency to focus on external events rather than inner experiences and to describe facts and actions without affective involvement; e) poor empathizing [6,7]. It has been hypothesized that limited ability of an alexithymic subject to process emotions cognitively, so that these are experienced as conscious feeling states, leads to focusing on the somatic sensations accompanying emotional arousal rather than elaborating on the content and context of emotions. These characteristics may lead alexithymic professionals working in radiation oncology to have a suboptimal interaction with the patient, leading to delusion and frustration during daily practice and increasing the likelihood to develop burnout [2]. We agree with doctor Leng that it is now time to take action to implement measures to improve professional quality of life and to reduce the risk of burnout and with his observation that alexithymia and empathy can be screened early during medical education [1]. One option could be getting rid of the 'heroic caring stereotype' in medical education [8]. At present, few components in formal medical training focus on the emotional sphere of students, in terms of both curricular instructions or physician role model indications. This is a mirror of the tendency of medical education to ignore, detach from and distance from emotions. Conversely, curricular efforts should be implemented to incorporate emotional awareness into medical student training, residency programs and core curricula, focusing on emotional regulation, emotional intelligence and on tools able to better deal with emotions such as psychological training, mindfulness meditation and narrative medicine [9,10].

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