



Date: June 5, 2012  
Memo to: Dr. Harold Dillon, Veterans Administration  
From: Dr. Bruce Stuck, Chair TSC-1 (Bioeffects)  
Subject: Explanation/Clarification: Medical Surveillance Examinations

### Question:

I am an ophthalmologist at a VA facility and am also the designated laser safety officer (LSO). I am in the process of updating our program with respect to Medical Surveillance and have a question about my interpretation of Appendix E of the above document.

Specifically, E2.1, **Rational for Surveillance Examinations** includes these statements:

“Based on risks involved with current uses of laser devices, medical surveillance requirements that should be incorporated into a formal standard appear minimal”

and,

“Other arguments in favor of performing extensive medical surveillance have been based on the fear that repeated accidents might occur and the workers would not report minimal acute injuries. The limited number of laser injuries that have been reported in the past 30 years and the excellent safety record with laser devices do not provide support to this argument.”

These statements would suggest to me that requirements for medical surveillance should indeed be minimal.

E3.1 **Rationale for Examinations** goes on to state, “individual institutions may provide pre-exposure screening and even continued surveillance; however, that surveillance was not deemed a requirement for safe laser usage.”

The initial sentence in E3.1.1 **Preassignment Medical Examination** goes on to state, “Except for examination following suspected injury, **these** are the only examinations required by this standard.

Given the above and based on my understanding that any suspected laser eye injury must be thoroughly investigated as outlined, I am confused as to whether the “**these**” above refers to preassignment medical examination making them also a requirement.

Given that JCAHO as well as other accreditation agencies will hold each medical institution, without leeway, to the standards outlined in your official policy, please state for me, and for the record, if there is a facility REQUIREMENT to accomplish preassignment medical examinations on all those with potential exposure to lasers.

I have corresponded with other institutions and mine is not the only example of consternation regarding interpretation of these passages..



## Explanation:

Medical Surveillance of laser workers has received significant discussion in the ASC Z136 over the past 10 years. With the publication of ANSI Z136-2007, medical surveillance of laser workers is now discretionary to an organization required to be in compliance with the ANSI Z136-2007 standard. Hence mandatory guidance on medical surveillance ("shalls" in the Z136.1 - 2000) was reduced to recommended guidance and moved to the "non-normative" Appendix E as you have noted. Technically, an organization can be in compliance with the ANSI Z136-2007 and NOT have a medical surveillance program. As you probably realize, the ANSI Z136 Laser Safety Standard is a "stand alone" "users" standard and by itself has no regulatory compliance requirement. When an organization, government (OSHA, DoD, VA, et cetera), or corporate requires compliance with the standard, they then provide the regulatory requirement, inspection, and the enforcement procedures.

As Appendix E indicates, ANSI Z136-2007 still "recommends" a medical surveillance program and gives general guidelines for its implementation. As you know, medical surveillance was required for compliance until the issuance of Z136.1-2007 Standard. However, with each iteration of the standard, the requirements for medical surveillance were continuously reduced. In the early days, pre-employment, periodic, and termination ophthalmological examinations were required for all with fundus photography required at one point. Laser personnel were divided in to two groups with only those with clear risk requiring periodic examinations. Over the thirty -forty years, a great deal of resources were expended on medical surveillance programs with few if any findings that contributed to LASER SAFETY per se. In other words, there were not findings that medical surveillance of laser workers that impacted laser safety practices (i.e. suggested (1) exposure limits were grossly wrong, (2) control measures should be revised, (3) there were unanticipated longer term affects or (4) other). Further medical-legal arguments that favor the medical surveillance of laser workers in the event of an untoward over-exposure or injury where pre-existing conditions could be known or potentially excluded were not germane to laser safety but MAY be important to the corporate organization involved. Further from a corporate's standpoint, a good "occupational vision" program is desirable by most organizations and general vision health could be assessed. Hence, the decision taken by ASC Z136 for the 2007 Standard was to render medical surveillance discretionary for compliance, to move the recommendation to a non-normative appendix but to recommend that a medical surveillance program "should" be in place with general guidance given.

While I personally agree with this approach, albeit I would definitely implement a medical surveillance program for laser workers when there is a real risk (frequent work with Class 3B and 4 lasers) and potential hazards that can not be (or are not) readily assessed (the DoD situation). I also think there is "laser safety" value in a medical surveillance for laser workers but that, in itself, does not justify medical surveillance for strictly laser safety purposes. I also am aware of the many "what ifs" associated with making medical surveillance of laser worker discretionary in the context of a Laser Safety Standard.

The "these" in Section E2.1.1 refers to examinations after a suspected injury. The wording is poor and I will make sure that it is clear in the version that is about to go out for vote. Again Appendix E is "non normative" and there for recommendation.