AbstractID: 8407 Title: Ultrasound Bioeffects and NCRP on Needed US Exposures: The Status of Current Output Limits and Displays

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The development of safety guidelines for the use of ultrasound imaging systems has occurred over a number of years and has now reach the point where on many systems, the operator is provided on-screen display of parameters related to the relative risk associated with the ultrasound exposure. These parameters come in the form of two indices termed the Thermal Index (TI) and the Mechanical Index (MI). Each of these was developed based on the desire to provide feedback for a more informed decision about the use of increased output to achieve a specific diagnostic information and in general to allow for the implementation of the principle of As Low As Reasonably Achievable (ALARA). The original intent was to relax the output restrictions given that the operator is provided and understands the implications of the displayed safety information. However, FDA limits have remained in place and various discussions are now occurring on the merits and safety implications of increasing acoustic output beyond the current limits. This presentation will provide the audience with the following.

1) An understanding of the origins of potential bioeffects from ultrasound.
2) An overview of the current regulatory structure.
3) A description of the safety indices used in diagnostic ultrasound.
4) An understanding of the bioeffects issues that relate to potential modification of the current output limitations.