Medical Physics Seminar Monday, October 14, 2019 1345 HSLC 4:00 P.M.



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The potential of Focused Ultrasound for brain tumour treatments

When combined with imaging guidance focused ultrasound (FUS) provides means for localized delivery of mechanical energy deep into tissues. This focal energy deposition can modify tissue function via direct thermal or mechanical interactions with the tissue. The impact of an ultrasound exposure can be potentiated by intravascular microbubbles that can enhance blood vessel permeability, increase acoustic absorption or induce direct mechanical disintegration of tissues. During the past few years the pre-clinical and clinical studies have demonstrated that FUS can be used for treatment of malignant tumors. In this talk, the progress towards clinical cancer treatments will be reviewed and the further potential discussed.