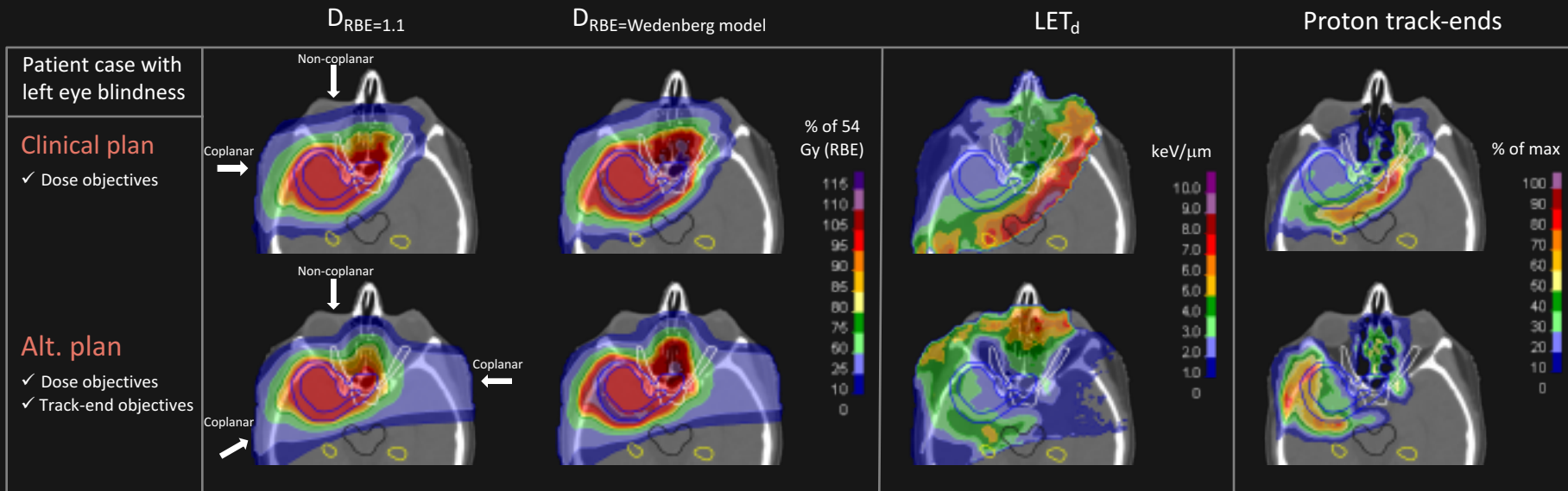


Planning strategies for LET reduction in structures with suspected treatment related toxicities following proton therapy for brain tumors



$$F = f_D + \lambda_{TE}^{OAR} \times H(TE^{OAR} - TE_{max}^{OAR}) \times \frac{[TE^{OAR} - TE_{max}^{OAR}]^2}{[TE_{max}^{OAR}]^2}$$

- F is the objective function including proton track-end (TE) objectives
- f_D is a regular physical dose based objective function
- λ_{TE}^{OAR} is the relative weight of the track-end objective for the OAR
- TE_{max}^{OAR} is the maximum allowable proportion of track-ends in the OAR
- TE^{OAR} is the fraction of track-ends falling in the OAR
- $H(x)$ is the Heaviside function being equal to 1 if $x > 0$, else equal to 0

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 Session Title: Particle Therapy Optimization and Planning
 Session Time: 08/01/2018 @ 1:45PM — 3:45PM