

The following is a list of treatment planning systems (TPS) and algorithm for dose calculation tested by the IROC Houston through the irradiation of the lung phantom. This list is divided in Acceptable and Unacceptable to be used for the calculation of dose within a medium with heterogeneities. This list represents IROC's current knowledge of TPS/algorithm in use.

Acceptable

Accuray Multiplan: Monte Carlo
Accuray TomoTherapy: Convolution Superposition
Brain Lab IPlan: Monte Carlo
Elekta Monaco: XVMC Monte Carlo or Collapsed Cone Convolution
Elekta XiO: multi-grid Superposition or Fast Superposition
Phillips Pinnacle: Collapsed Cone Convolution or Adaptive Convolve
Prowess Panther: Collapsed Cone Convolution
RaySearch RayStation: Collapsed Cone Convolution
Varian Eclipse: AAA or Acuros
Helax: Collapsed Cone
Nomos Corvus: Monte Carlo
In House TPS: Monte Carlo

Unacceptable

Accuray Multiplan: Ray Tracing
Brain Lab IPlan: Pencil Beam or Clarkson
Elekta XiO: Modified Clarkson or FFT Convolution
Philips Pinnacle: Fast Convolve
Varian Eclipse: Pencil Beam
Helax: Pencil Beam
Nomos Corvus: Pencil Beam
In House TPS: Pencil Beam or Clarkson base

This list is updated based on statistics done over the results of the irradiation of the lung phantom for the new TPS/algorithm. If your TPS/algorithm is not listed, please contact the IROC Houston at 713-745-8989 and ask for Paola Alvarez or Carrie Lujano.

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