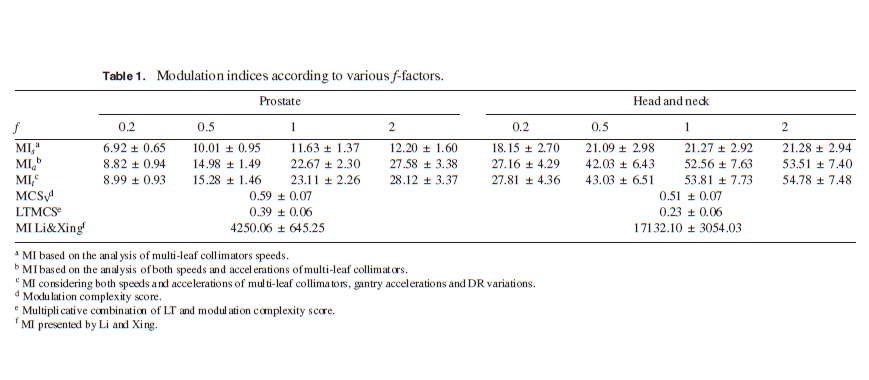
**VMAT TRF(Treatment Delivery System) file analysis with RTplan DICOM(TPS)**

* Target Dose: 61.6Gy/28fx
* Total MU: 643.5
* Number of control points: 147
* Max. Gantry Speed (TPS): 6 deg/s
* Max. Dose Rate (720MU/min)
* Max. num of Arc: 1

Inspired by Park, J. M., they consider leaf speed, leaf acceleration, gantry speed and dose rate in QA metrics, found the MI\_s, MI\_a, MI\_t had high correlation with gamma passing criteria results in VMAT plan. But the conventional QA metrics like MCS/LTMCS seems in-correlated with VMAT QA results.

**(Mateirals):**

* 20 NPC and 20 Prostate VMAT plans
* Eclipse System (two full arcs), dose grid 2.5mm
* MapCHECK2 (measured 2D dose distribution V.S. TPS calculated dose)



手机屏幕截图

描述已自动生成

1. **Check the consistency of differential MU between TPS and TDS**

截图里有图片

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1. **Check time interval between control points (estimated from DICOM VS. Delivery)**

**手机屏幕截图

描述已自动生成**

1. **Check average gantry speed between control points (estimated from time interval)**

**图片包含 游戏机, 文字

描述已自动生成**

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**图片包含 游戏机

描述已自动生成**

1. **Check MLC speed between 2 control points (from TRF e.g. CP3-> CP4)**

**图片包含 游戏机, 截图

描述已自动生成**

**图片包含 游戏机, 截图

描述已自动生成**

**截图里有图片

描述已自动生成**

**Reference**

**[1]** Park, J. M., Park, S. Y., Kim, H., Kim, J. H., Carlson, J., & Ye, S. J. (2014). Modulation indices for volumetric modulated arc therapy. *Physics in Medicine & Biology*, *59*(23), 7315.