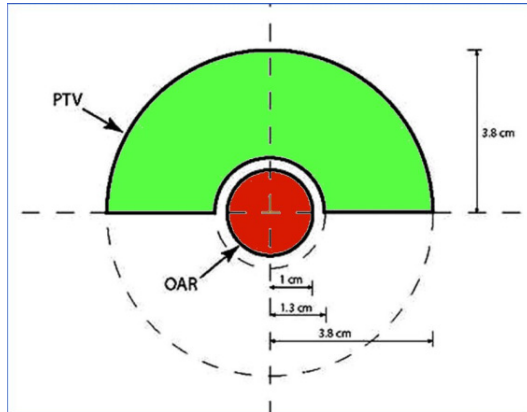


# IMRT Benchmark Revision

- State criteria of acceptability
  - Metric to distinguish “bad” plans
- Include new technologies
- Encourage electronic submission

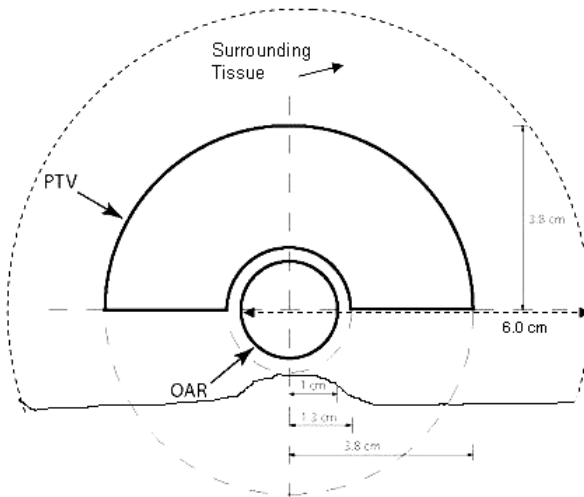
# IMRT Benchmark



## Acceptability Criteria:

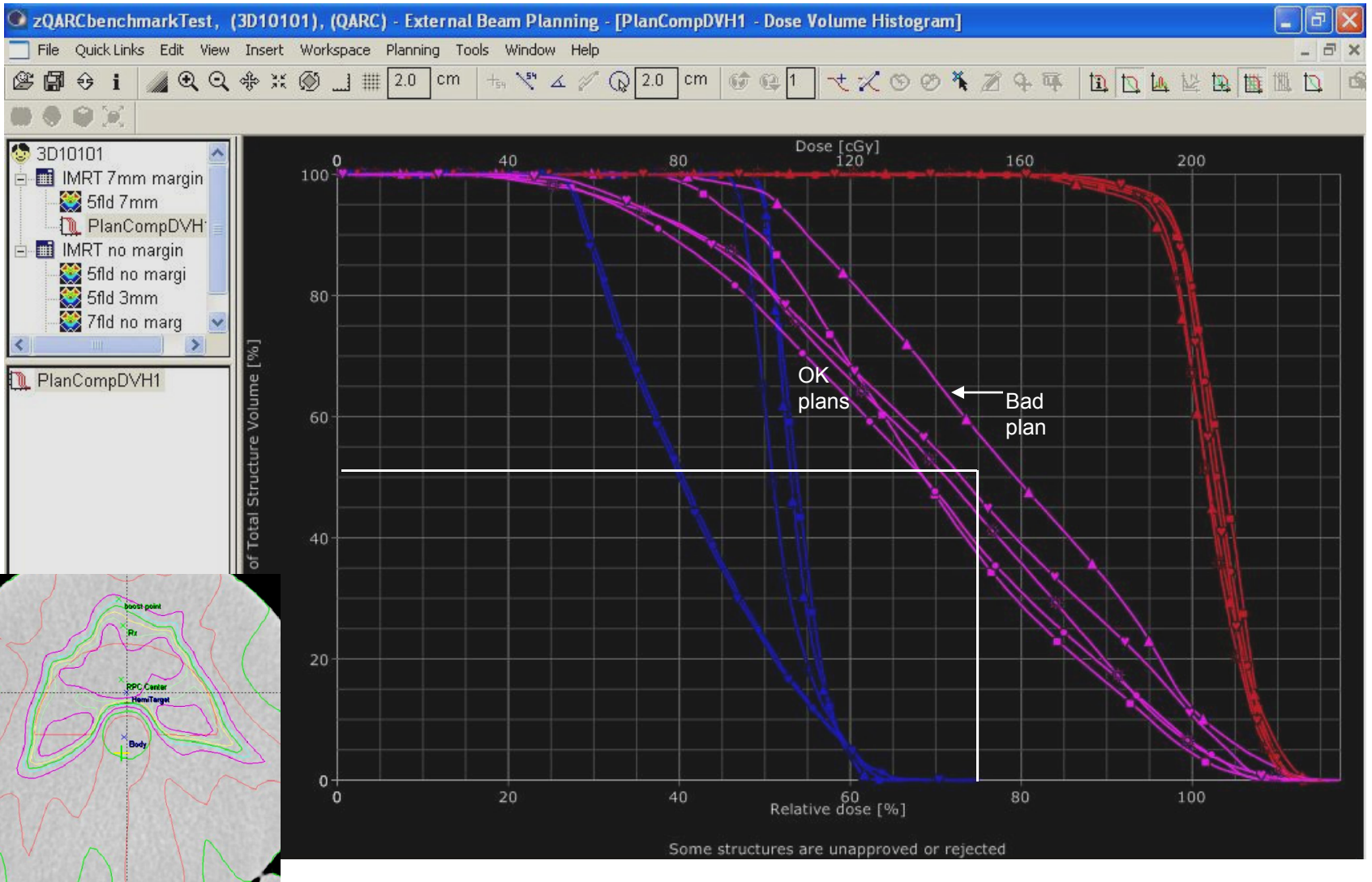
$\geq 95\%$  PTV receives  $\geq 95\%$  dose

$\leq 5\%$  OAR receives  $\geq 60\%$  dose

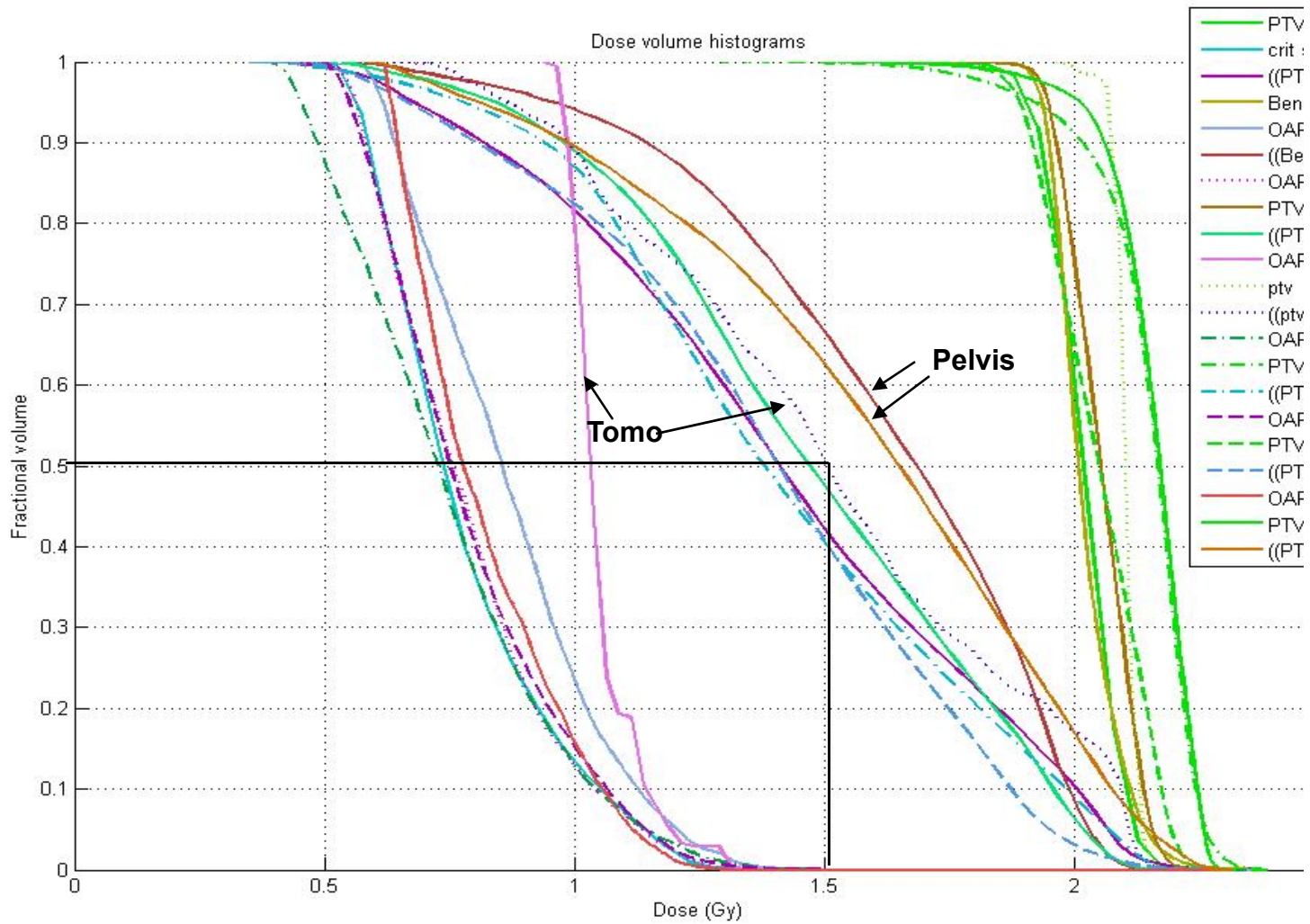


? Metric to distinguish  
"OK" from "bad" plans

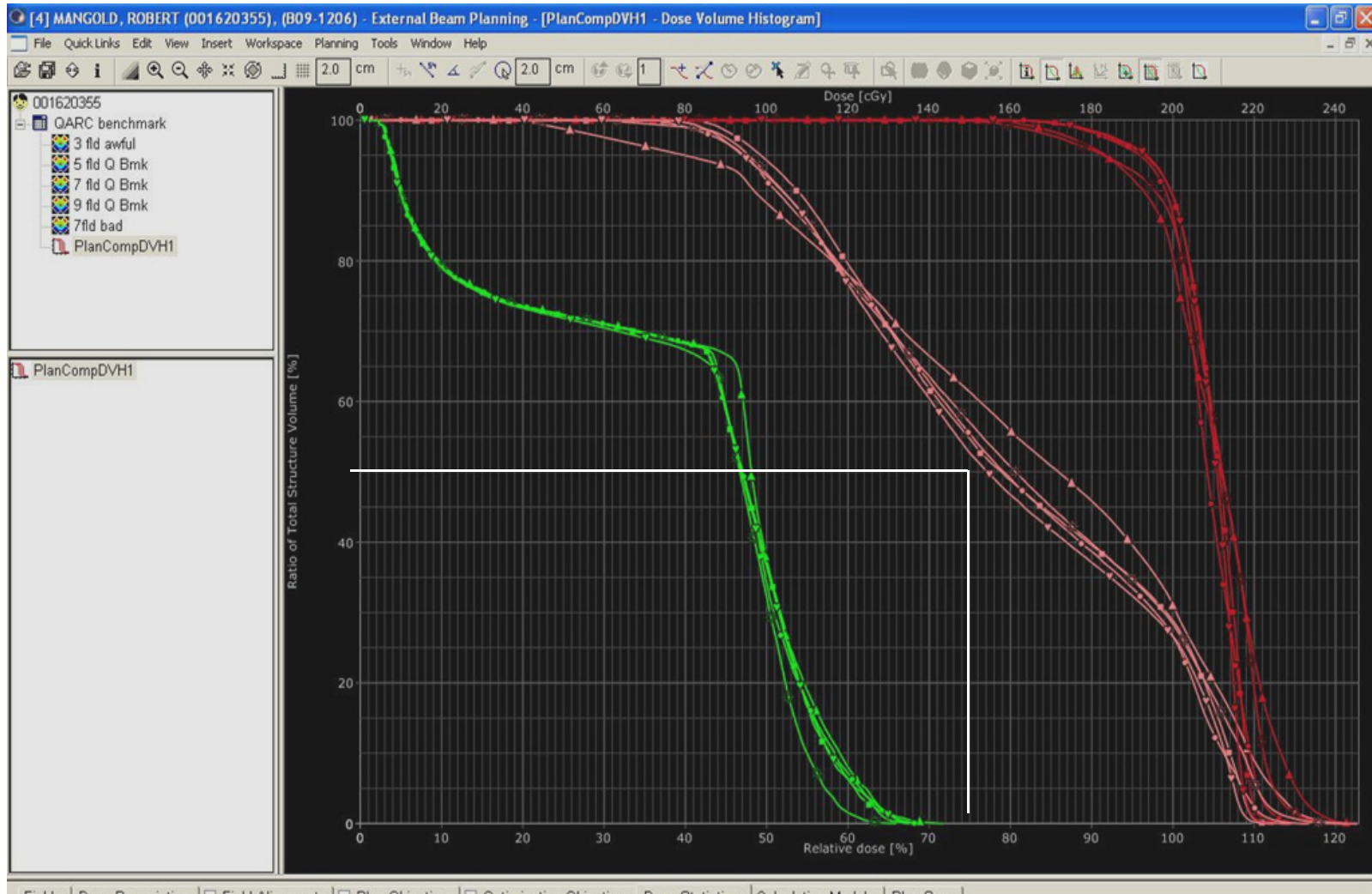
# IMRT Bmk - Head



# QARC OK'd Benchmarks

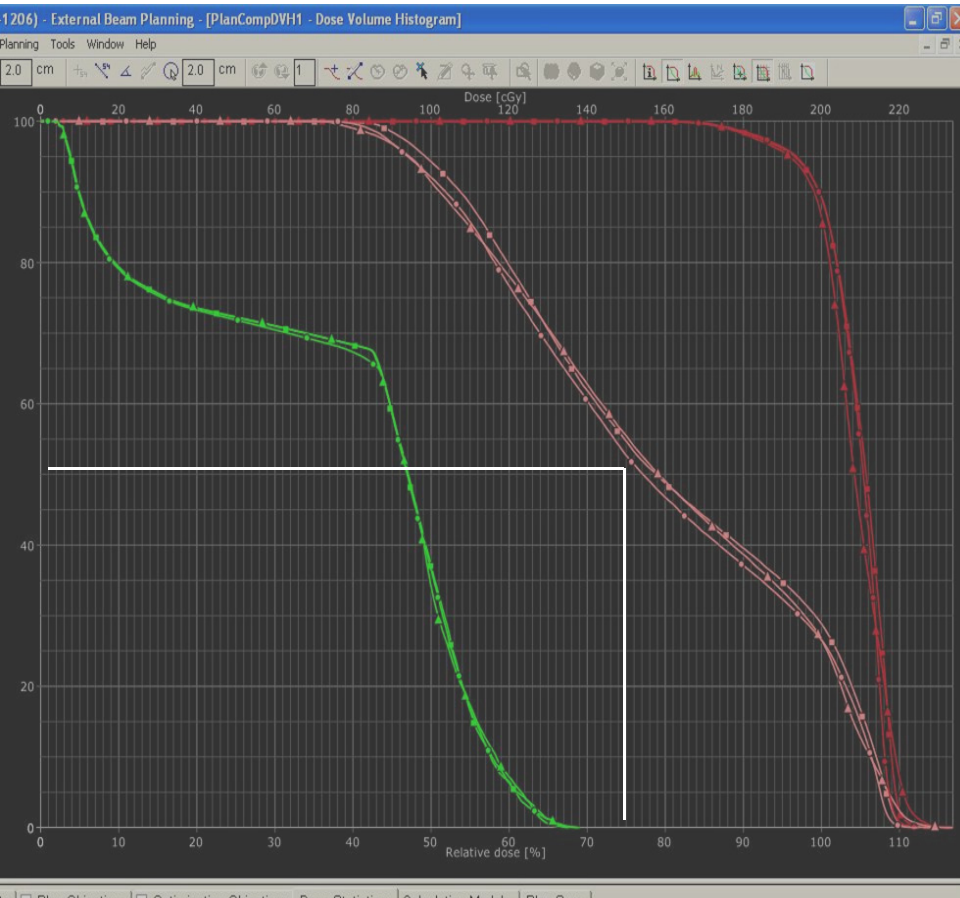


# IMRT Bmk - Pelvis

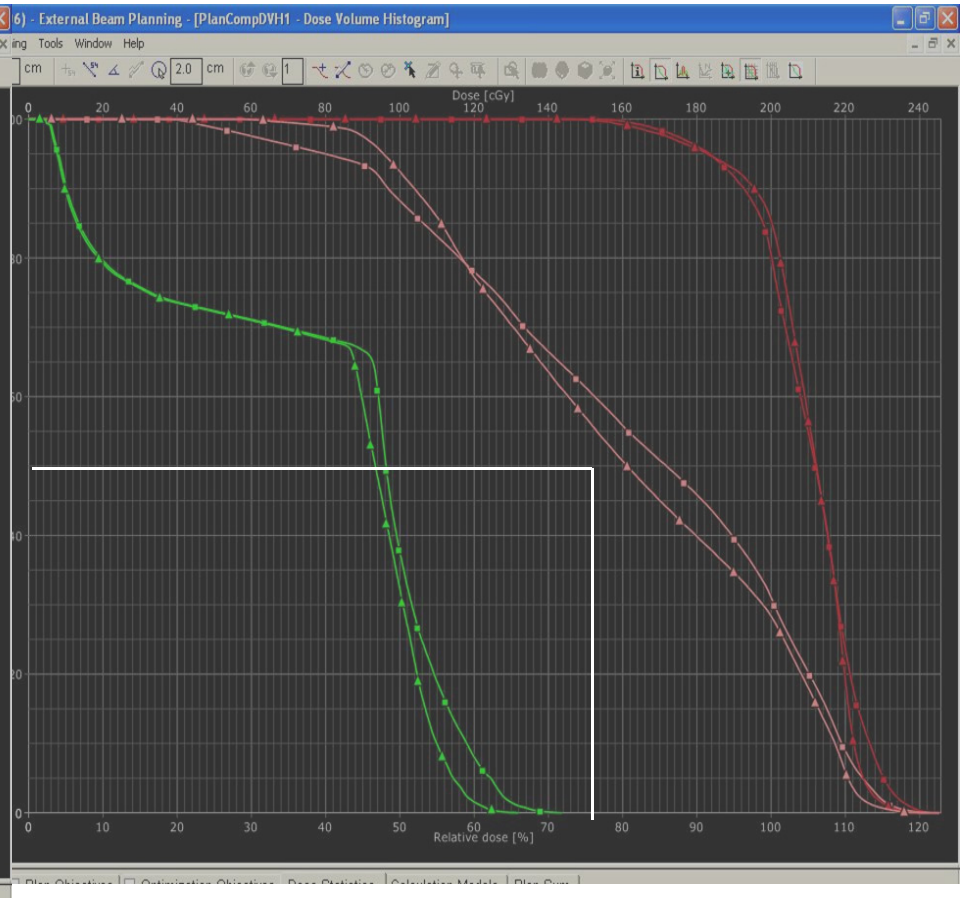


# IMRT Bmk - Pelvis

## OK Plans



## Bad Plans



# Proposed Changes:

- For “step and shoot” and “sliding window” techniques the treatment plan shall consist of beams from at least 4 and not more than 9 gantry angles. Tomotherapy and other dynamic arc treatments (e.g. RapidArc and VMAT) shall be delivered in the usual clinical manner.
- This benchmark is not applicable to Cyberknife units; those must complete the head and neck phantom irradiation
- Institutions are strongly encouraged to submit the IMRT plan electronically, by sFTP or on CD.

# Proposed Changes:

## Added Acceptability Criteria:

**An IMRT benchmark will be judged to be acceptable if it satisfies the following criteria:**

- 95% of the PTV must receive at least 95% of the prescribed dose (i.e.190 cGy).**
- No more than 5% of the PTV will receive a dose greater than 115% (230 cGy) of the prescribed dose.**
- No more than 5% of the OAR shall receive greater than 60% (120 cGy) of the prescribed dose.**