Objectives:

• Review:
  I. Goal and Structure of TG 275 Survey.
  II. Survey Aggregate data and Global results.
  III. Initial results of Survey vs. FMEA cross-reference.
# TG 275 Members

<table>
<thead>
<tr>
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<th>Email/Contact Details</th>
<th>Role</th>
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<tbody>
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</table>

## AAPM Supporting Staff

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<tr>
<th>Name</th>
<th>Email/Contact Details</th>
<th>Role</th>
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</thead>
<tbody>
<tr>
<td>Woodward, Michael E</td>
<td>1/1/1997 AAPM Staff - Deputy Executive Director - (ex officio, nonvoting)</td>
<td></td>
</tr>
<tr>
<td>Xing, Yan-Hong</td>
<td>1/1/2016 AAPM Staff - Database Administrator -</td>
<td></td>
</tr>
</tbody>
</table>
TG 275 Goal

• Develop recommendations for:
  • Initial Plan Check
  • On-Treatment Chart Check
  • End-of-Treatment Chart Check

How? Survey + FMEA Evaluation
Treatment Modalities

External Beam
- Photons
- Protons

Brachytherapy
- AAPM - Brachytherapy Subcommittee
  Regina K. Fulkerson, PhD
  Wayne M. Butler, PhD

In progress ...
Survey - Structure and Format

Initial Plan Check
- Patient Assessment
- Imaging for RT Planning
- Treatment Planning
- Pre-Treatment Review and Verification

On-Treatment Chart Check
- Treatment Delivery
- On-Treatment Quality Management

End-of-Treatment Chart Check
- Post-Treatment Completion

Survey

Incentives for Participation

• Opportunity to fulfill Part 2 MOC for Self-Assessment CE (up to 15 hours of SA-CE) and Part 4 MOC requirement for PQI Activity.
• Enrollement in a raffle for a complementary meeting registration.
• Opportunity to compare your specific response to the global average of all participants.
• Promote survey using social media (e.g. LinkedIn, AAPM bulletin boards)
Survey Content and Validation

• **55** Demographics Questions:
  – 18 -> General
  – 20 -> Initial Plan Check
  – 17 -> On-Treatment Chart Check

• **256** Items Check or Review:
  – 151 -> Initial Plan Check
  – 38  -> Proton Specific Initial Plan Check
  – 52  -> On-Treatment Chart Check
  – 15  -> End-of-Treatment Chart Check

15 – 30 minutes
Data Collection

• Surveying Period:
  – Open for 7 Weeks (From Feb 10th to March 31st 2016)

• The tool that was used for the Survey:
  – QuestionPro
1526 Total Participants:
- 1310 from US,
- 60 from Canada,
- 107 from 35 other countries,
- 49 were left blank for this question
TG 275 - Response Rate

• Expected response rates for this type of survey:
  – 10 to 40%

• Our Survey:
  – AAPM membership in Radiotherapy: ~4500 members
  – Response Rate: ~33%
Academic-affiliated hospital (31%)
Community hospital (39%)
Free Standing Clinic (19%)
Government hospital (7%)
Consulting Group (2%)
Vendor (0%)
Other: (2%)

Type of Institution

Average No. of Patients Treated Daily
(Practice Size)

<50 - 39%
51 - 100 - 34%
>100 - 27%
Panoramic View of the Results of the Survey
Items Checked during **Initial Plan Check** Process
Items Checked during **Initial Plan Check** Process
Sorted By **Level of Agreement**

Global Agreement on Items Checked [%]

N = 151
Items Checked during **Initial Plan Check** Process
Sorted By **Level of Agreement**

- 90% or better agreement in 25% of the items checked
- 75% or better agreement in 50% of the items checked

N = 151
## Items Checked during Initial Plan Check with **Lowest Level** of Agreement

<table>
<thead>
<tr>
<th>Clinical Process</th>
<th>Item Check</th>
<th>Level of Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Assessment</td>
<td>Diagnosis definition including imaging and outside records</td>
<td>37%</td>
</tr>
<tr>
<td>Patient Assessment</td>
<td>Consult Note</td>
<td>35%</td>
</tr>
<tr>
<td>Patient Assessment</td>
<td>Patient Consent</td>
<td>29%</td>
</tr>
<tr>
<td>Patient Assessment</td>
<td>Utilization of other treatment modalities (i.e. chemo, surgery)</td>
<td>25%</td>
</tr>
<tr>
<td>Patient Assessment</td>
<td>Pathology Report</td>
<td>19%</td>
</tr>
<tr>
<td>Patient Assessment</td>
<td>Peer review of treatment decision (e.g. tumor board, peer-to-peer evaluation, etc.)</td>
<td>17%</td>
</tr>
<tr>
<td>Patient Assessment</td>
<td>Insurance Approval</td>
<td>11%</td>
</tr>
<tr>
<td>Simulation</td>
<td>CT Scanner technique (e.g. kV, filter, etc.)</td>
<td>19%</td>
</tr>
<tr>
<td>Simulation</td>
<td>Transfer of images to archiving system</td>
<td>15%</td>
</tr>
<tr>
<td>Simulation - Motion Management</td>
<td>Gating parameters</td>
<td>23%</td>
</tr>
<tr>
<td>Treatment Planning- Contouring</td>
<td>Approval of contours by MD</td>
<td>29%</td>
</tr>
</tbody>
</table>
Number of Items Checked: **52**

(a) 90% or better agreement in 8% of the items checked
(b) 75% or better agreement in 37% of the items checked

Number of Items Checked: **15**

(a) 90% or better agreement in 20% of the items checked
(b) 75% or better agreement in 40% of the items checked
### On-Treatment Chart Check

<table>
<thead>
<tr>
<th>Clinical Process</th>
<th>Item Check</th>
<th>Level of Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Progression</td>
<td>RTT Tasks Completed</td>
<td>31%</td>
</tr>
<tr>
<td>Treatment Progression</td>
<td>MD Tasks Completed</td>
<td>30%</td>
</tr>
<tr>
<td>Documentation and QA</td>
<td>Daily QA</td>
<td>34%</td>
</tr>
<tr>
<td>Documentation and QA</td>
<td>Time-Out Performed</td>
<td>30%</td>
</tr>
<tr>
<td>Documentation and QA</td>
<td>Case Presented at Chart Rounds</td>
<td>24%</td>
</tr>
</tbody>
</table>

### End-of-Treatment Chart Check

<table>
<thead>
<tr>
<th>Clinical Process</th>
<th>Item Check</th>
<th>Level of Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentation and QA</td>
<td>All RTT Tasks Completed</td>
<td>33%</td>
</tr>
<tr>
<td>Documentation and QA</td>
<td>Data/Imaging Archived</td>
<td>20%</td>
</tr>
<tr>
<td>Documentation and QA</td>
<td>Follow up Imaging for treatment evaluation</td>
<td>9%</td>
</tr>
<tr>
<td>Documentation and QA</td>
<td>Follow up Patient Management Visit</td>
<td>5%</td>
</tr>
<tr>
<td>Documentation and QA</td>
<td>Follow up Lab Work</td>
<td>4%</td>
</tr>
</tbody>
</table>
Academic vs. Community Centers in USA

Global Agreement on Items Checked [%]

- Academic
- Community

High Level to Low Level

Agreement Items Checked
Items Checked depending on the RadOnc Information System

High Level

Low Level

Agreement

Items Checked

Global Agreement on Items Checked [%]

0.0 10.0 20.0 30.0 40.0 50.0 60.0 70.0 80.0 90.0 100.0

ARIA  MOSAIQ
Are initial plan check practices statistical significance different depending on specific demographics?

Number of days to complete a plan check:

- 1-3 days: 64%
- <1 day: 33%
- 3-5 days: 3%
- >5 days: 0%

Debbie Schofield’s Session
TG -275
Next Milestone

Survey + FMEA Evaluation

What’s Most Important

Mapping of Current Practices
TG 275 FMEA vs. Survey cross-reference

FMEA – Failure modes RPN Score

Survey – Percent use of check

High %
Low RPN

High %
High RPN

Low %
Low RPN

Low %
High RPN
TG 275 FMEA vs. Survey cross-reference
AAPM Community

Thank you!!