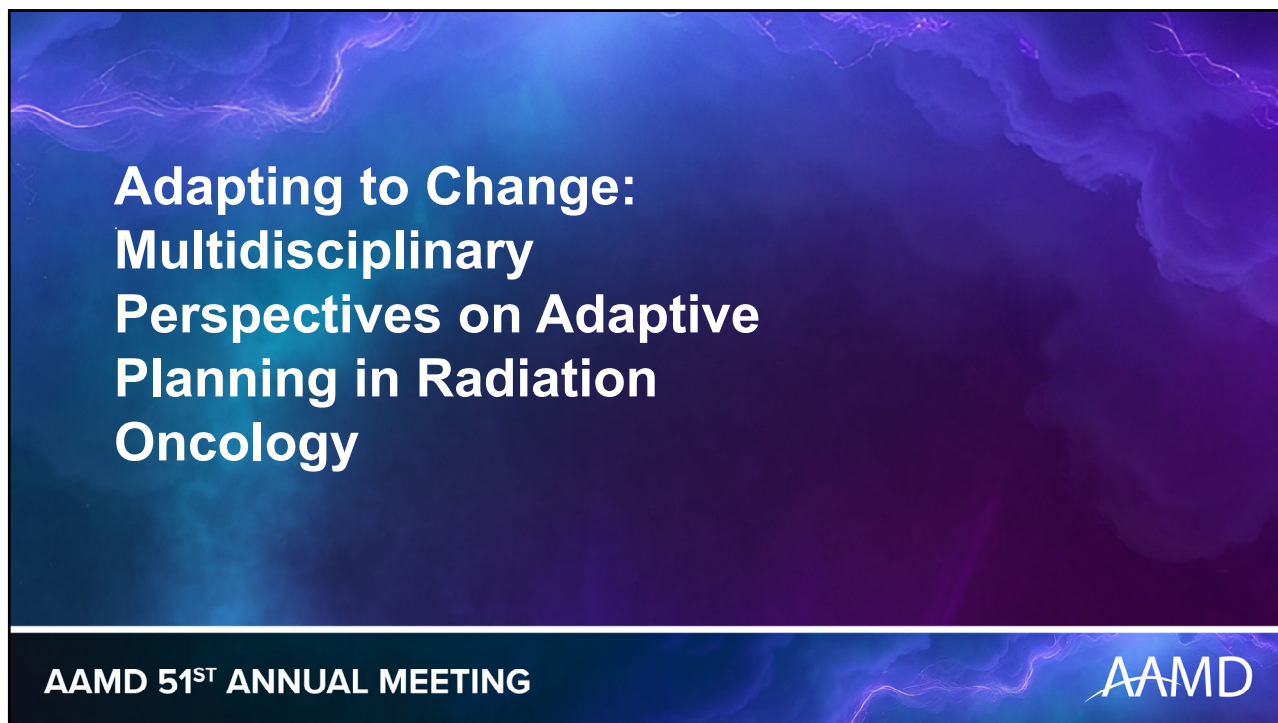


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2

Adaptive Radiation Therapy (ART)

Definition: ART is a dynamic radiation treatment modality where the patient's treatment plan is adapted based on imaging that occurs during the course of treatment.

Offline ART: The treatment plan is adapted between fractions based upon imaging acquired during previous treatment sessions – replanning for weight loss, loose mask, etc.

Online ART: The treatment plan is adapted prior to the treatment session based upon real time imaging and is adapted while the patient is on the table.

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Adaptive Radiation Therapy (ART)

Online ART requires the following to occur during the treatment session:

- Quick, high-quality imaging
- Rapid contouring and re-optimization of an initial treatment plan to adapt to this imaging
- Evaluation of the adapted plan
- QA of adapted plan
- Delivery of adapted plan

To perform all these activities during a reasonable time frame (20-60 minutes), online ART utilizes Artificial Intelligence (AI) for automatic contouring and re-optimization of the initial plan

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4

Adaptive Radiation Therapy (ART)

Vendor	Product	Imaging
Elekta	Unity	MRI
Elekta	Evo	CT
Varian	Ethos	CT
Accuray	Radixact	CT
ViewRay	MRIdian	MRI

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5

Adaptive Radiation Therapy (ART)

Panel Question 1

Describe your role in adaptive planning at your current clinical site?

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6

Adaptive Radiation Therapy (ART)

Panel Question 2

How is adaptive planning changing the day-to-day workflow for each member of the Radiation Oncology team?

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7

Adaptive Radiation Therapy (ART)

Panel Question 3

What technologies or techniques have been the most influential in making adaptive planning feasible in routine clinical settings?

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Adaptive Radiation Therapy (ART)

Panel Question 4

From a dosimetric and physics standpoint, what are the current limitations in plan adaptation and quality assurance?

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9

Adaptive Radiation Therapy (ART)

Panel Question 5

How can departments ensure patient safety and maintain treatment accuracy as adaptive workflows become more complex?

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10

Adaptive Radiation Therapy (ART)

Panel Question 6

What training or educational strategies are needed to prepare new and existing staff for adaptive planning roles?

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11

Adaptive Radiation Therapy (ART)

Panel Question 7

How can communication between dosimetrists, therapists, physicists and physicians be optimized to streamline processes?

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12

Adaptive Radiation Therapy (ART)

Panel Question 8

Looking ahead, what do you see as the next major advancement or barrier in the clinical adoption of adaptive radiotherapy?

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13

Adaptive Radiation Therapy (ART)

Panel Question 9

What challenges did you experience in the initial stages of implementing adaptive treatment into your clinic, and how did you overcome these challenges?

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14

Adaptive Radiation Therapy (ART)

Panel Question 10

Were there any changes from non-adaptive plans to adaptive plans that your therapy team or physicians had to adjust to?

TZ, KS, RB

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15

Adaptive Radiation Therapy (ART)

Panel Question 11

What part of the adaptive planning and treatment process is the most challenging for your team and why do you think that is?

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16

Adaptive Radiation Therapy (ART)

Audience Questions

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