

مستشفى الملك فيصل التخصصي ومركز الأبحاث  
King Faisal Specialist Hospital & Research Centre  
Gen. Org. مؤسسة عامة

الجمعية السعودية للأورام  
SAUDI ONCOLOGY SOCIETY

accept the challenge

# 2016 RADIOTHERAPY PLAN COMPETITION

Be the strongest link in the radiotherapy chain

*Knowledge Sharing for Better Quality*

**Live-Webinar Series**

**RayStation TPS**

**Organizer:**

**Ahmad Nobah, M.Sc. , DABR**

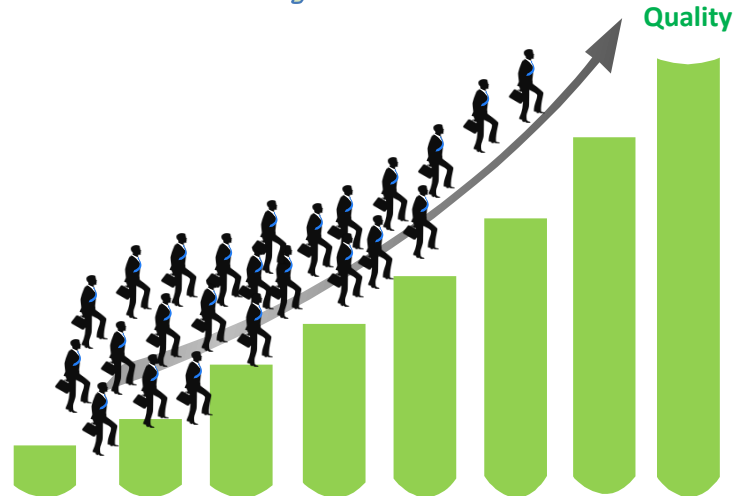
Medical Physicist

Biomedical Physics Department

King Faisal Specialist Hospital & Research Centre

Riyadh, Saudi Arabia

July 17, 2016

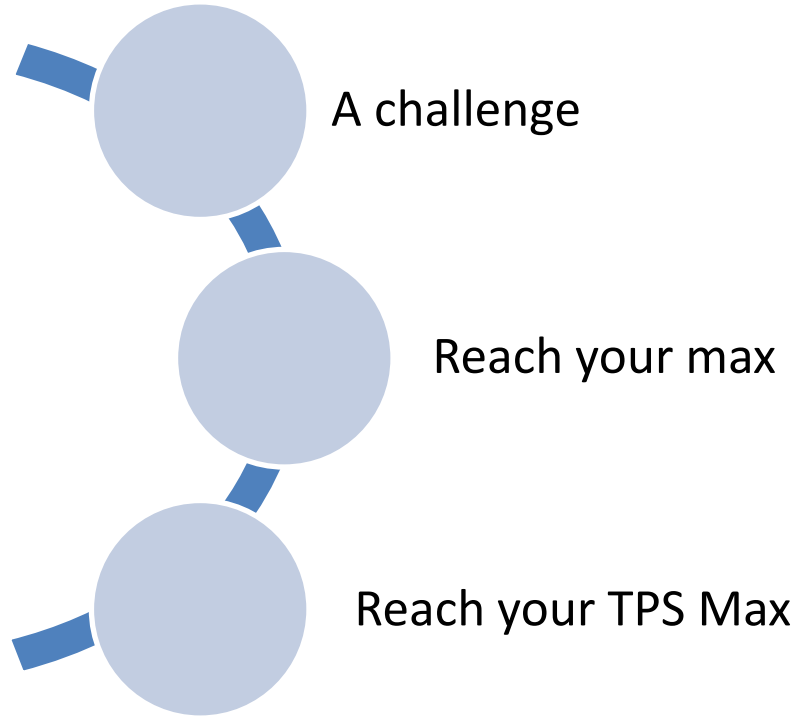




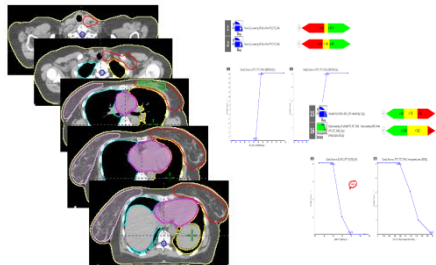
## Agenda

- The 2016 plan competition: Ahmad Nobah (5 min)
- RayStation Best Plan Presentation: Hugues Mailluex (France): 25 min
- Final Announcements: Ahmad Nobah (5 min)

# Plan Competition



# Plan Competition - Concept



**Download**

**Plan**



**Select Best Plans**



**Share Best Plans & Techniques**



**Through Live-webinar  
and shared documents**

# Competition Cycle





The banner features a sagittal cross-section of a human head and neck on the left, with green and red areas indicating radiation dose distribution. In the center, there are two logos: the King Faisal Specialist Hospital & Research Centre logo (a green circle with a palm tree) and the Saudi Oncology Society logo (a globe with 'SOS' text). Below the logos, the text reads 'مستشفى الملك فيصل التخصصي ومركز الأبحاث' and 'King Faisal Specialist Hospital & Research Centre Gen. Org. مؤسسة عامة'. The main title '2016 RADIOTHERAPY PLAN COMPETITION' is in large, bold, yellow-green letters. At the bottom, a dark blue bar contains the slogan 'Be the strongest link in the radiotherapy chain' in white. On the right, a yellow pennant-shaped graphic contains the text 'accept the challenge' in black and white.

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**2016 RADIOTHERAPY  
PLAN COMPETITION**

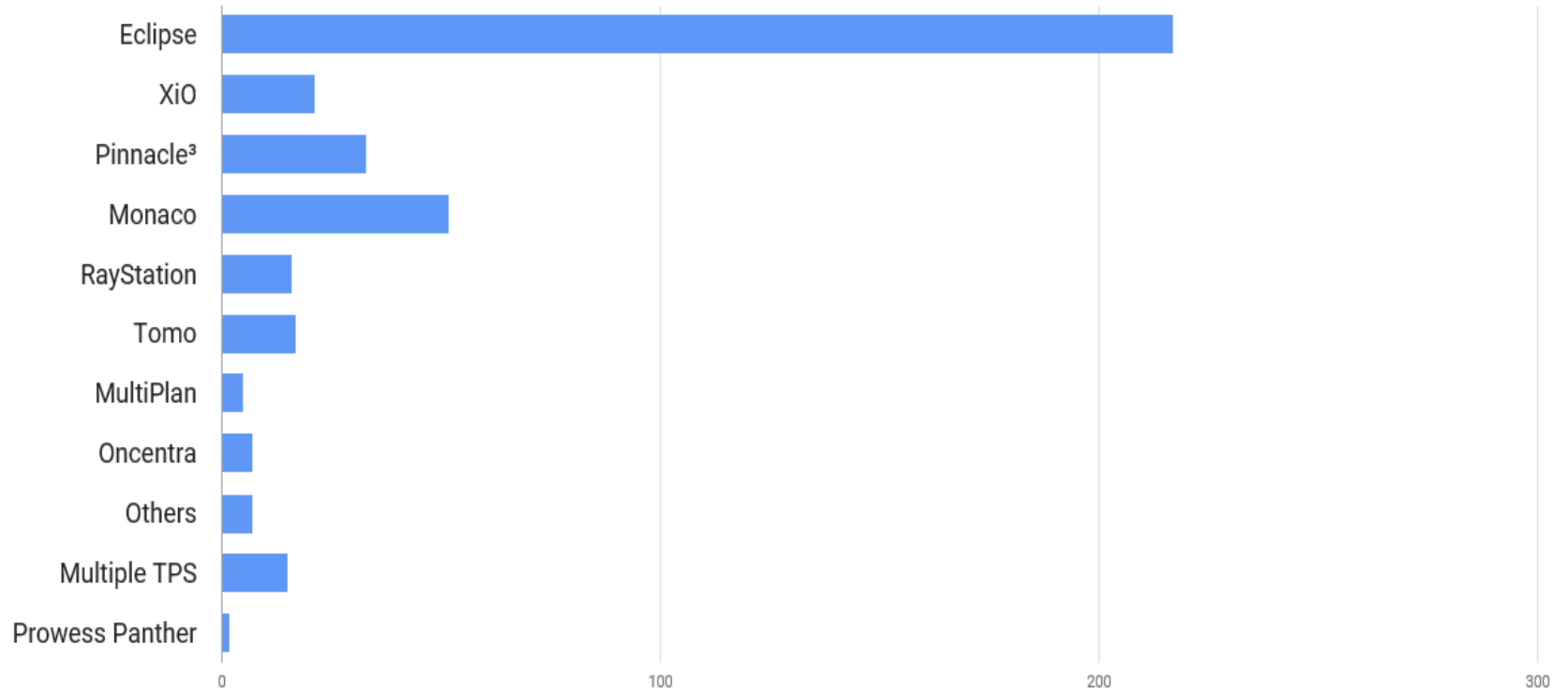
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The first edition of the Radiotherapy International Plan Competition:

- Statistics
- Case Description & Dosimetric Criteria

# Treatment Planning Systems



No. Participants





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Activities so far:

- Eclipse TPS Live-webinar
- Monaco TPS Live-webinar
- Pinnacle TPS Live-webinar
- Tomotherapy TPS Live-webinar

**Website**

# Website

<http://www.radmed.org/plancompetition2016.php>

WhatsApp competition group.  
To join us, send a msg to the  
admin No:  
**+966-531271245**

To join our mailing list:  
Send email to  
**anobah@kfshrc.edu.sa**

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Scroll Down

## 2016 RADIOTHERAPY PLAN COMPETITION

Be the strongest link in the radiotherapy chain

THE ULTIMATE WINNER OF THIS COMPETITION IS OUR CANCER PATIENT

Live-Webinar Presentation:

- To download the "Results Announcement Live-Webinar Presentation" please [Click here](#)
- To download the "3D-CRT Live-Webinar Presentation" please [Click here](#)

General Comments:

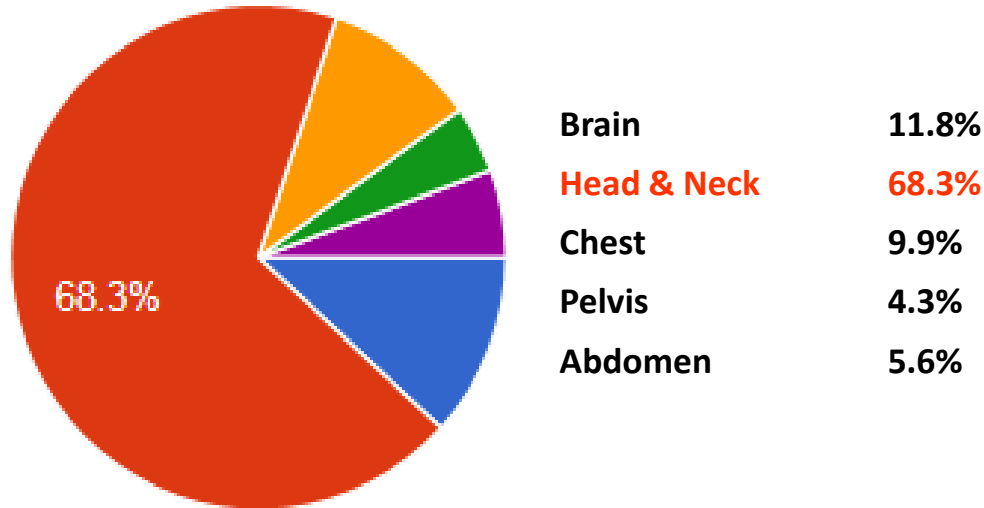
- Next Live-Webinar will be Eclipse TPS, the date will be on June 2nd 2016 (*NEW*)
- Please check the Important Dates tap to follow up with the live-webinar schedules

About the Competition	The Competition Process	The Evaluation Tool	Statistics of 2016	Important Dates	Evaluation Form	<b>Evaluation Responses</b>
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**Evaluation Responses**  
165 Forms Submitted

# Evaluation Responses

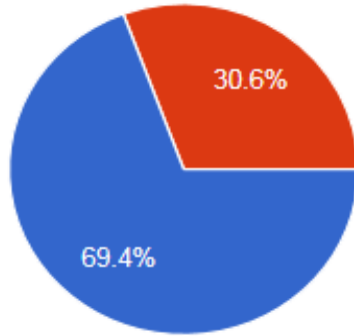
What site you suggest to be selected for our next competition?



**Organizers' Response**

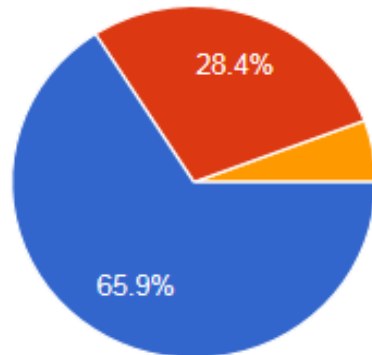
**Decision has been made:  
2017 Plan Competition will  
be Head & Neck case  
Get Ready 😊**

Was the time given to finish the plan (2 weeks) enough?



Yes	69.4%
No	30.6%

If the time was short, what do you suggest the period (weeks) to be for the next competition?



Three weeks	65.9%
Four weeks	28.4%
Five weeks	5.7%

Organizers' Response

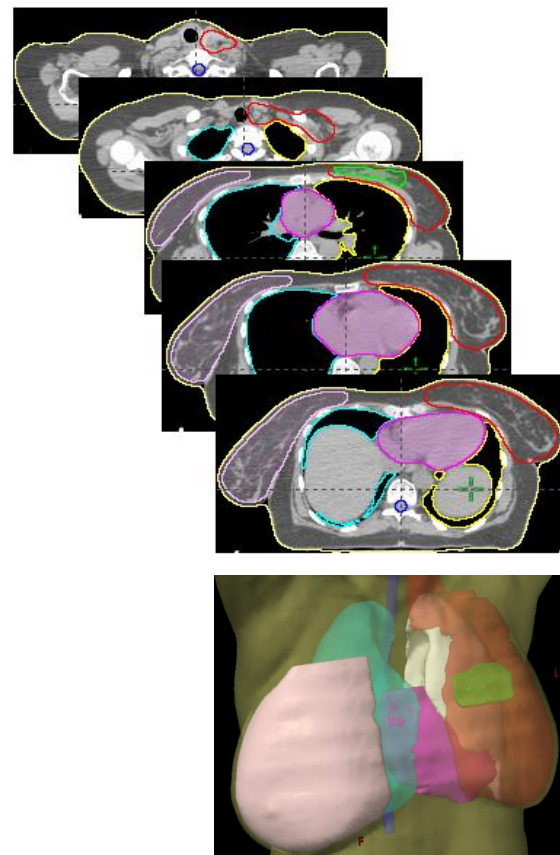


2017 Plan Competition will have 3 weeks planning time

# Case Description

# Case Description

- Case diagnosis: Left Breast Cancer
- Treatment Site: Left breast with axilla and supraclavicular lymph nodes
- Target: PTV\_TOT\_EVAL
- Dose prescription: 50.0 Gy in 25 fr.
- Protocol followed: RTOG-1304 ( Criteria squeezed more ! )
- Techniques: 3D-CRT, IMRT, VMAT
- General plan criteria were set: # of fields, single isocenter, energies, ... etc
- Dose calculation grid should be less than 3 mm
- PB dose calculation is not allowed to be used
- Generated plan should be deliverable (no couch/patient collision)



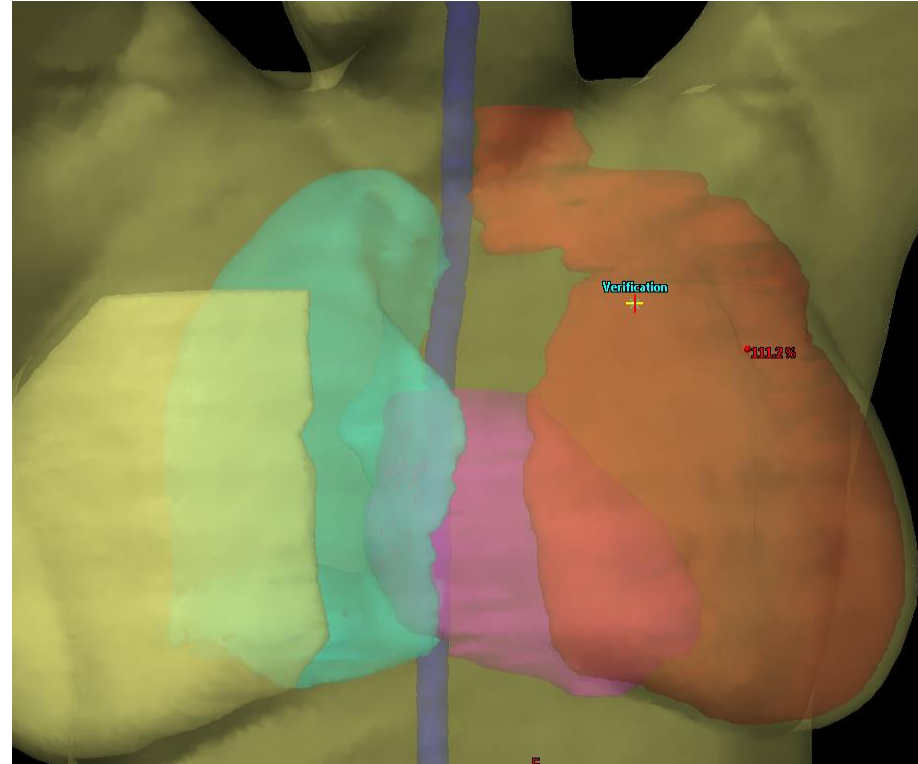
# Challenging Criteria

## 1. Target: (Total of 45 points out of 100)

- DVH
- Conformity Index
- Homogeneity Index

## 2. OARs:

- Heart: (Total of 20 points)
- Left Lung: (Total of 19 points)
- Contra-lat Breast: (Total of 6 points)
- Right Lung: (Total of 4 points)





**How to get started ?**

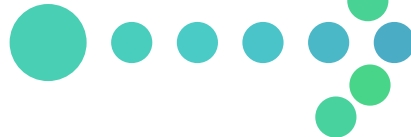
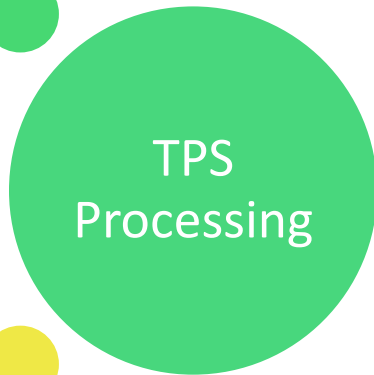
Contouring



Field Geometry



Optimization

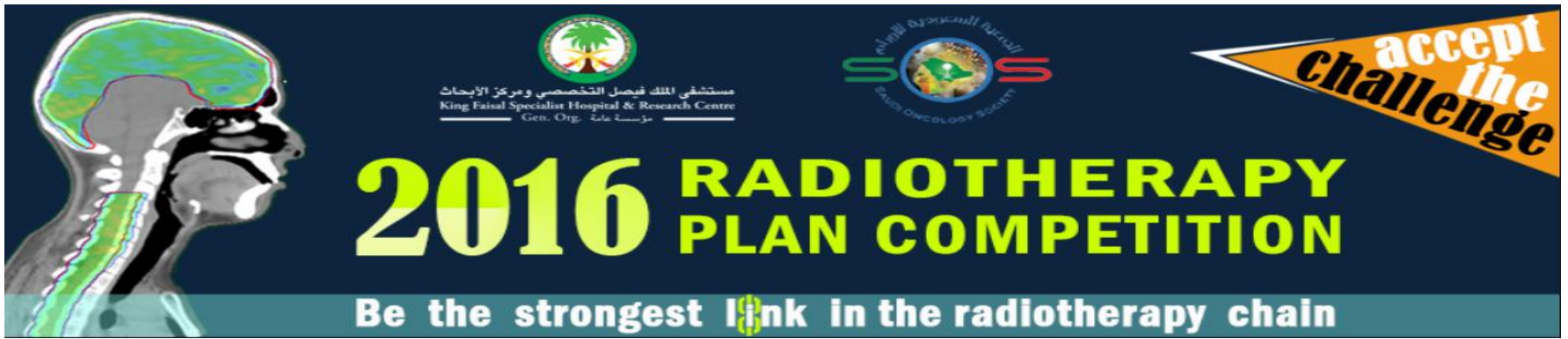


**Good inputs → Good outputs**

**Mr. Hugues got the highest score in our competition**

**98.2/100**

**Let us find out more about his amazing plan  
and also learn some of his thinking methodology**



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## Announcements

- IAEA Web: Human Health Campus (Medical Physics main page)
- Join us and subscribe to our YouTube Channel:  
[Radiotherapy Plan Competition & Medical Physics](#)
- Dropbox shared folder: Already sent (Webinars + Best Plans' Templates)
- Your follow-up questions → Plz add them to the survey after webinar or send to Ahmad
- Follow-up re-plan will be in on Aug 14<sup>th</sup>, 2016 ☺ get ready



## Google Follow-up Document

- The main goal is to share the best practice per TPS for the Follow-up Re-Plan (Aug 14<sup>th</sup>, 2016), and compare your previous plan with the one created based on this document.
- LT Breast google document will be shared with you per TPS, soon – plz submit your questions
- Questions need to be related to the LT Breast plan
- Please do not answer the questions in the Google document, add your own questions 😊



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## Thank you

- Sun Nuclear Corp: Plan IQ software
- Saudi Oncology Society for their sponsorship and support
- King Faisal Specialist Hospital & Research Centre
- To all participants for being with us in this journey and we hope to see you in our next competition

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**WhatsApp's competition group:**

**To join us, send a msg to the admin No:**

**+966-531271245**

**To join our mailing list:**

**Send email to Mr. Ahmad Nobah (anobah@kfshrc.edu.sa)**



The banner features a dark blue background with a light blue horizontal band at the bottom. On the left is a sagittal cross-section of a human head and neck, with a green and yellow heatmap overlaying the brain and neck area. In the top center, there are two logos: the King Fahad Specialist Hospital & Research Centre logo (a green circle with a palm tree) and the Saudi Society of Radiotherapy Oncology (SSRO) logo (a globe with 'SSRO' text). To the right is a yellow pennant with the text 'accept the challenge'. The main title '2016 RADIOTHERAPY PLAN COMPETITION' is in large, bold, yellow-green letters. Below it, the slogan 'Be the strongest link in the radiotherapy chain' is written in white, with a yellow-green link icon. At the bottom, the text 'THE ULTIMATE WINNER OF THIS COMPETITION IS OUR CANCER PATIENT' is in a yellow-green, monospace-style font.

2016 RADIOTHERAPY PLAN COMPETITION

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THE ULTIMATE WINNER OF THIS COMPETITION IS OUR CANCER PATIENT

*Share the competition with your colleagues  
Let us make the next competition reach thousands*

Thank you :)