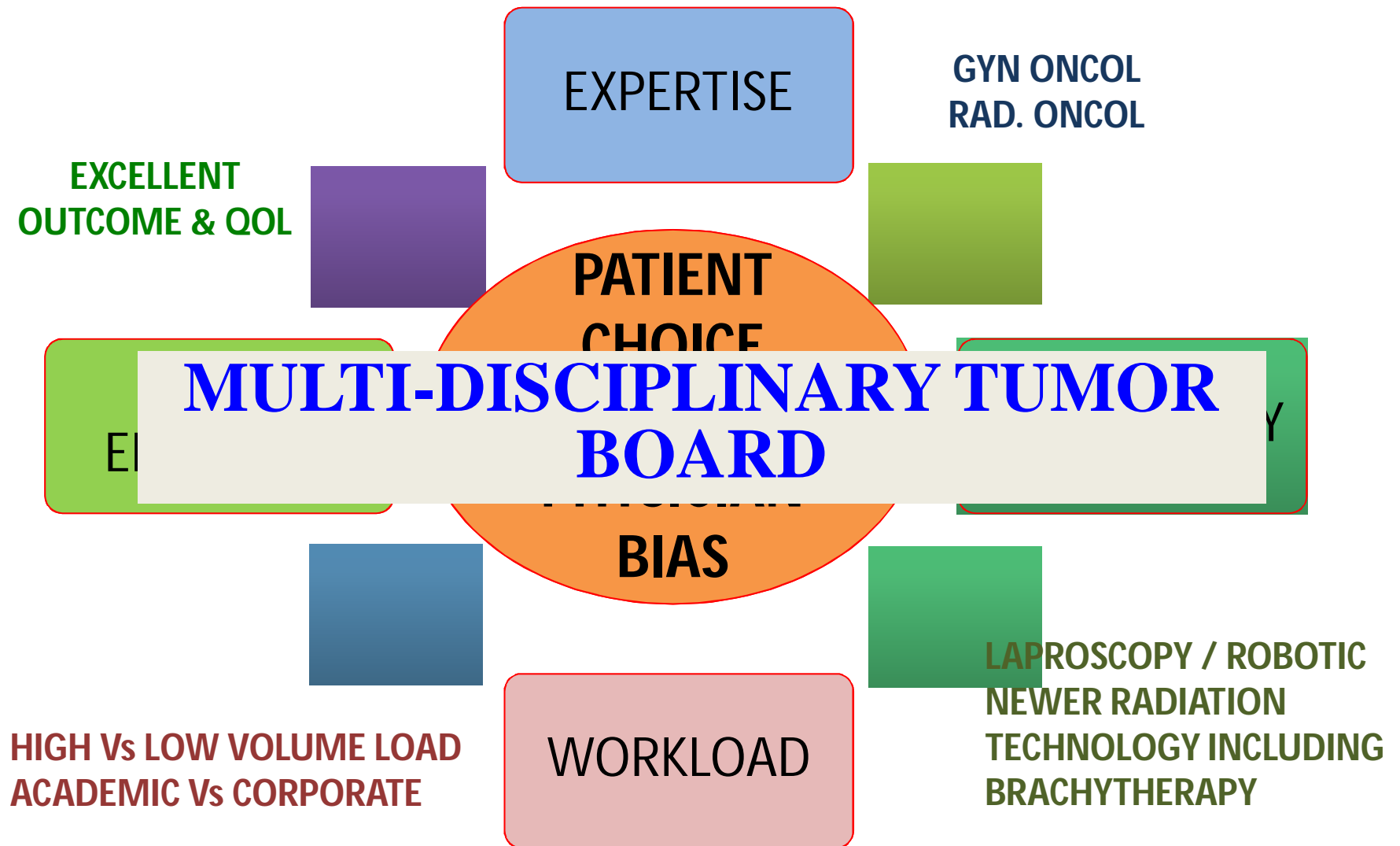


SUMMARY

UMESH MAHANTSHETTY
DANIEL BERGER

Message : 1

TREATMENT DECISION



At Diagnosis

Message : 2

At Brachytherapy

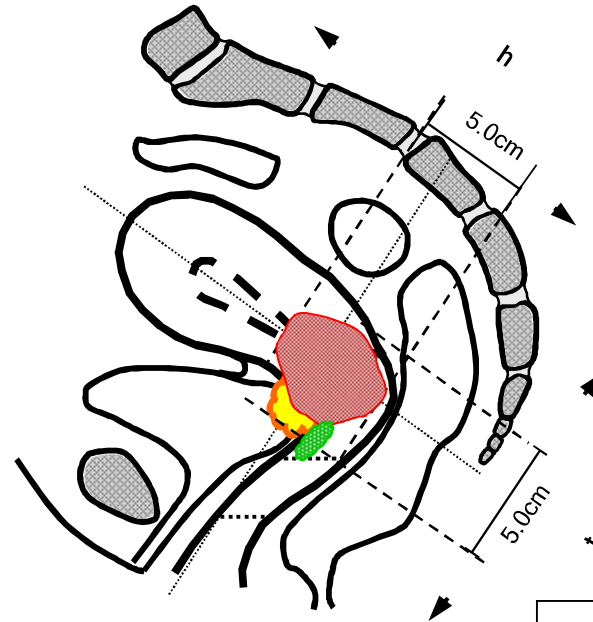
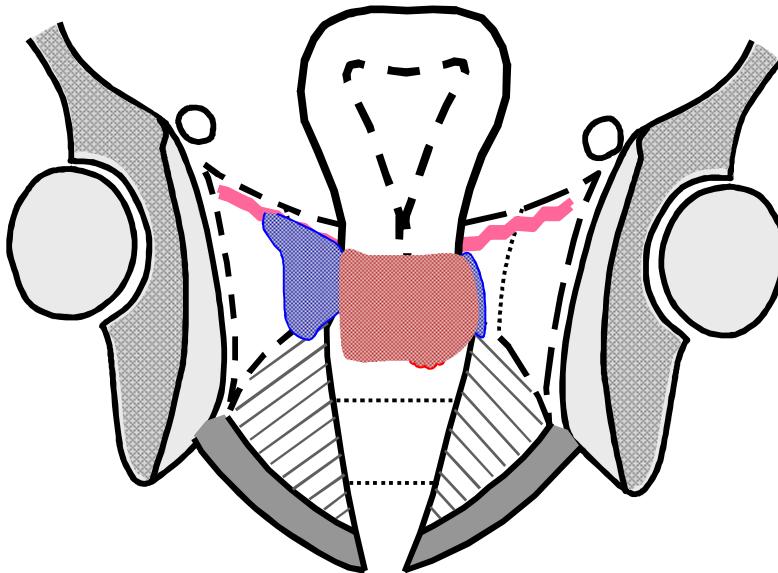
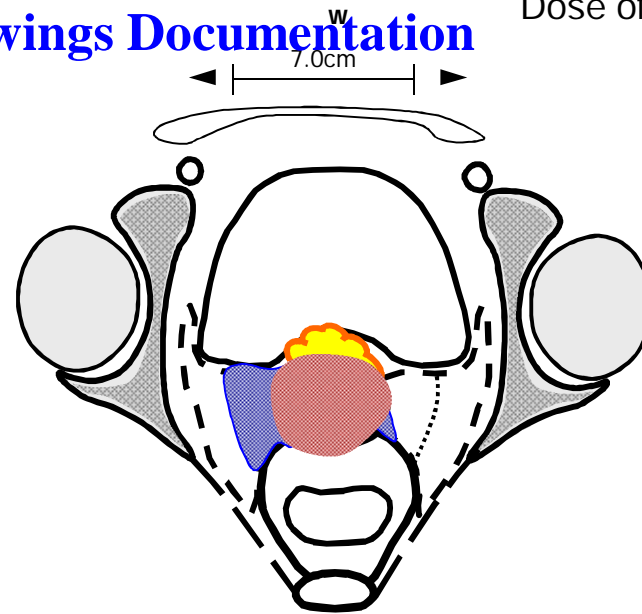
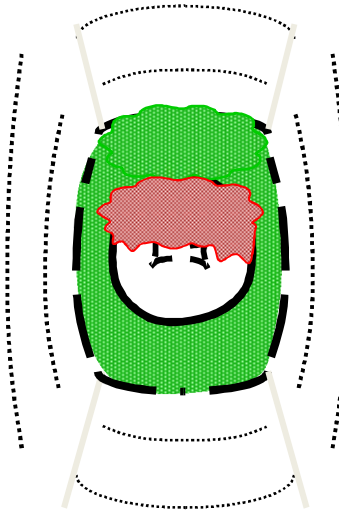
Dose of EBRT 45 Gy

Clinical Examination & Drawings Documentation

IVA - Bladder

w = 7.0 cm
h = 5.0 cm
t = 5.0 cm

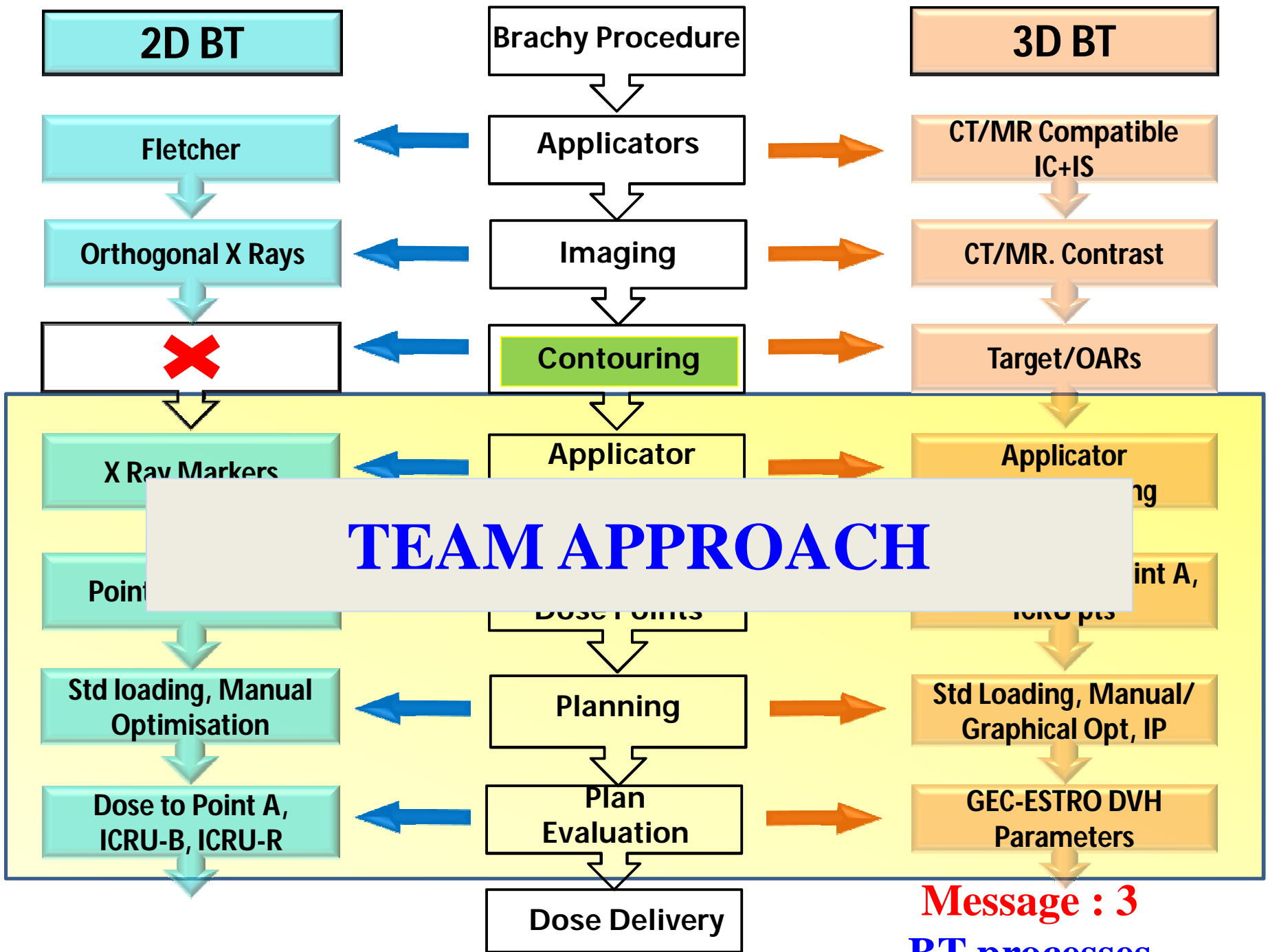
Vagina: 2.5 cm

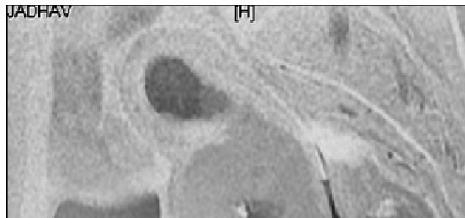
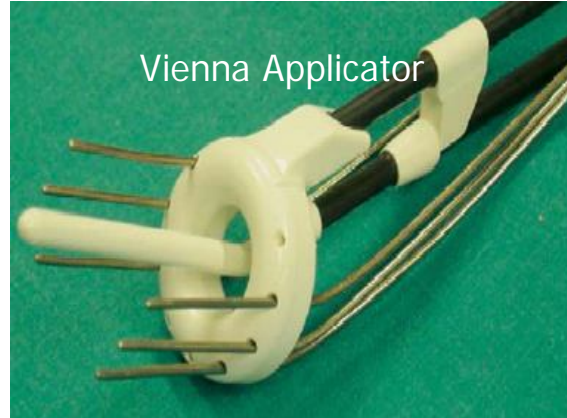


dd/mm/yy
/ /

Signature

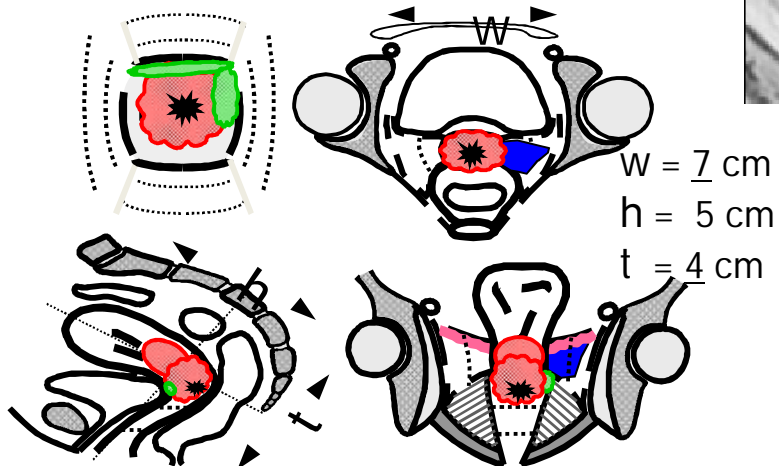
Case V





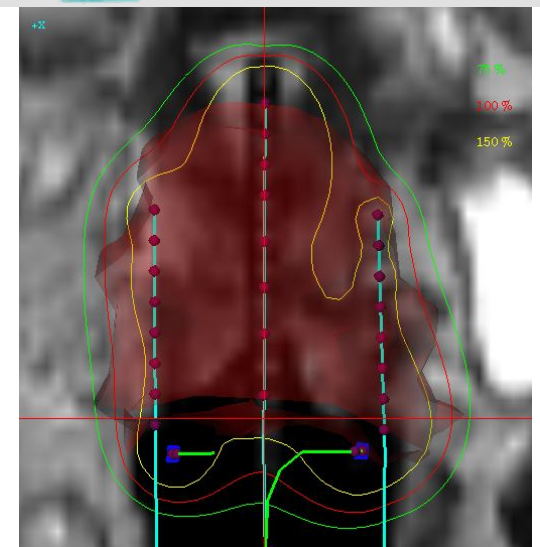
Benefit of Image Based BT Approach

Application – Imaging – Optimization

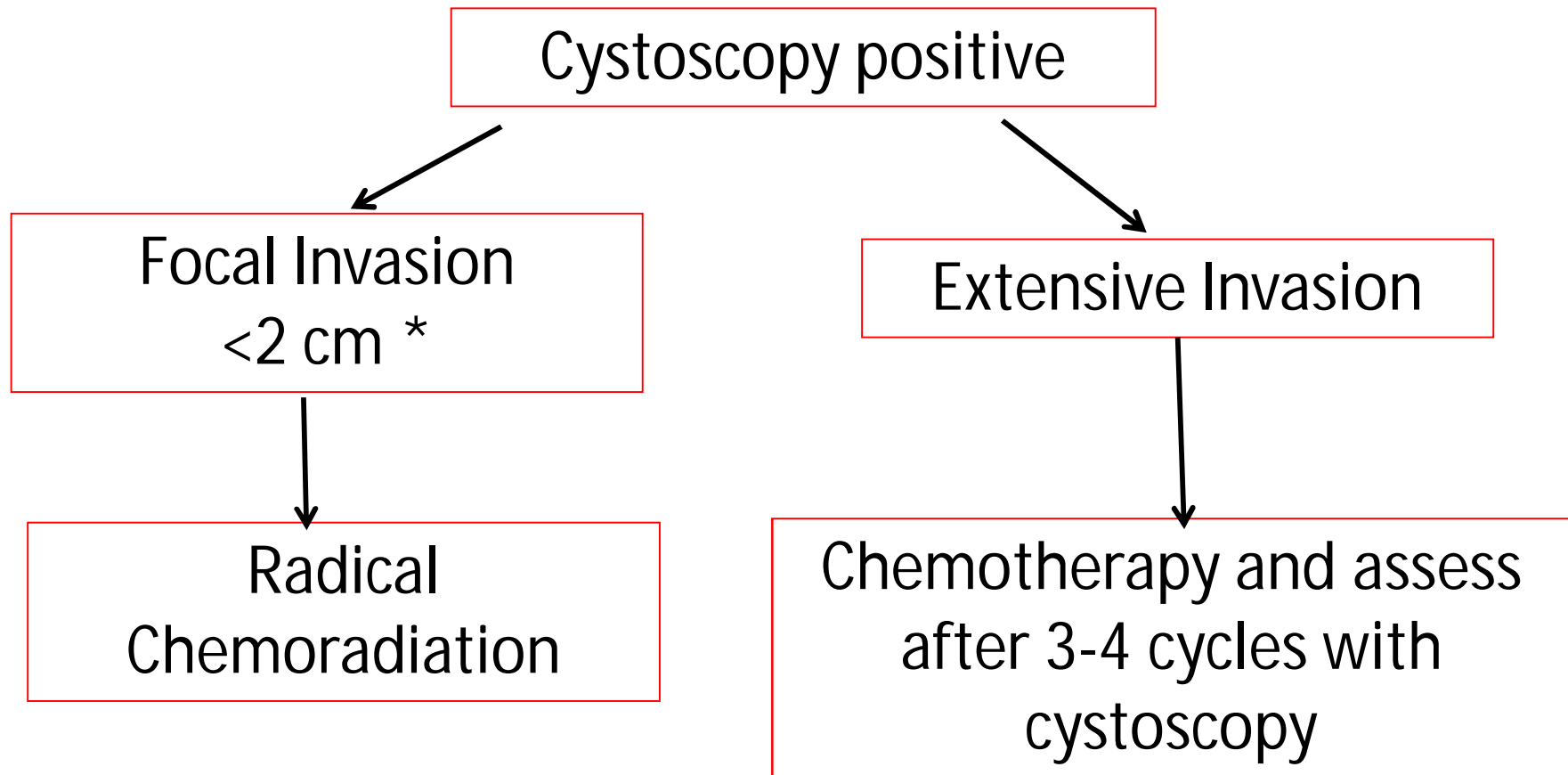


“GOLD STANDARD”

**Clinical drawing
&
MR Imaging**



Cancer Cervix FIGO IV A (Bladder Mucosa Involved)
MRI and Cystoscopy shows bladder invasion at Diagnosis



** Arbitrary and not based on any evidence-*

Cancer Cervix FIGO IV A (Bladder Mucosa Involved)
MRI and Cystoscopy shows bladder invasion at Diagnosis

After 45- 50 Gy EBRT: A Repeat Cystoscopy is performed

Negative

Positive

MRI with BT Applicators

No Grey zones in
bladder wall

Grey zones in
bladder wall

High signal intensity
in bladder wall

To include the
involved wall in IR-
CTV only but not in
HR-CTV

To include the
involved wall in HR-
CTV

To include the involved wall and
mucosa as GTV-B*

* If adjacent bladder wall shows grey zones then
include it in HR-CTV

60 - 65 Gy EQD2

> 85 Gy EQD2**

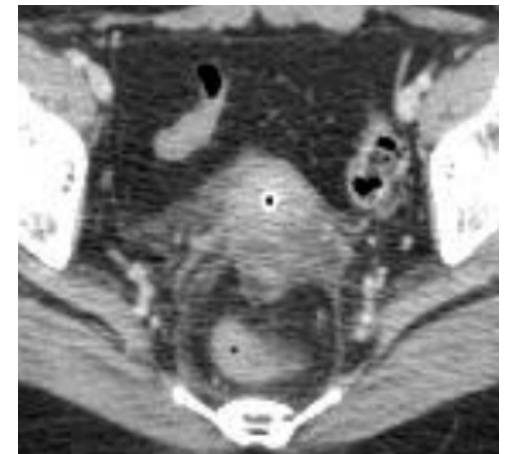
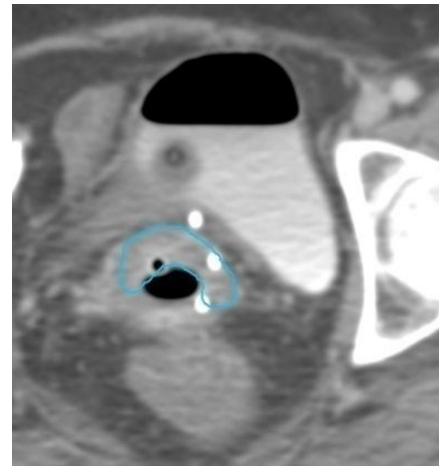
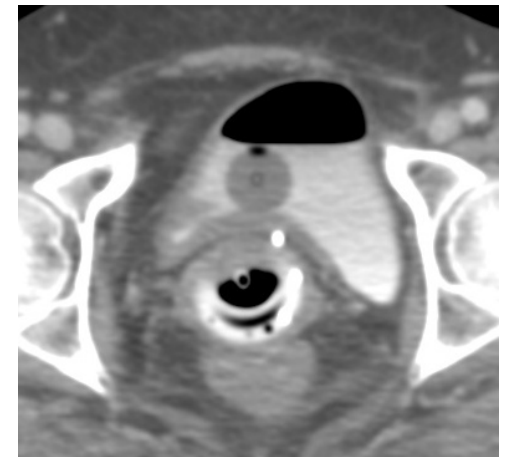
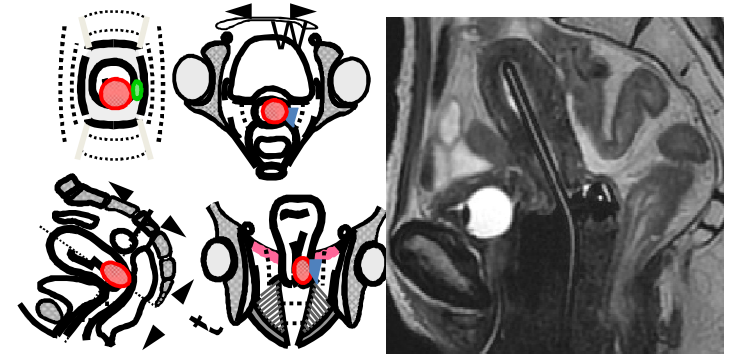
90 -95 Gy EQD2 to GTV-B**
> 85 Gy EQD2 to HR-CTV

** Risk of higher bladder toxicities to be anticipated

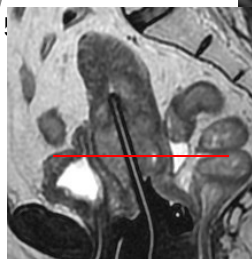
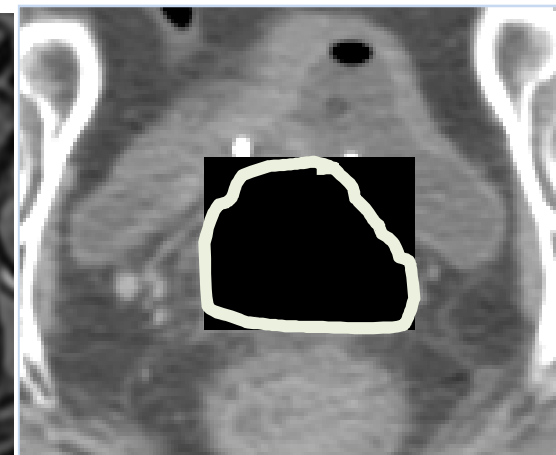
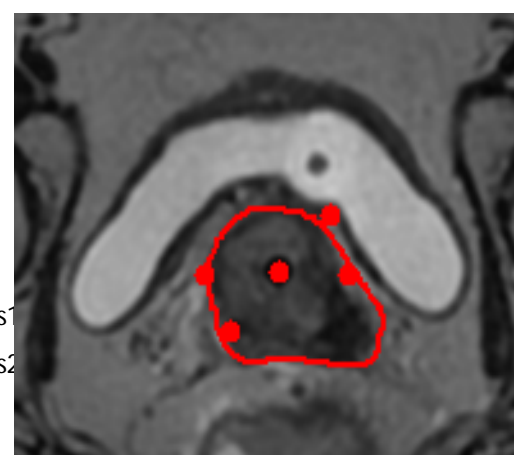
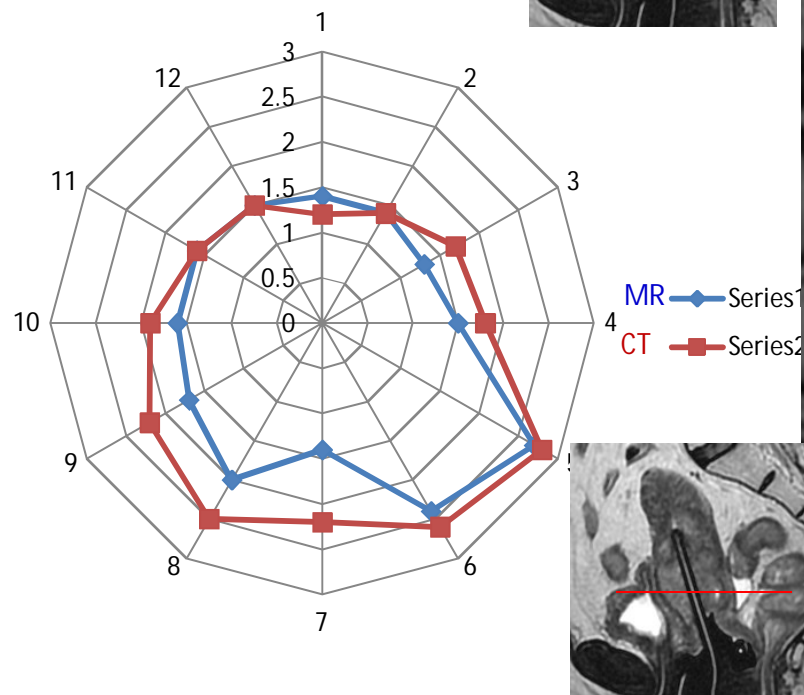
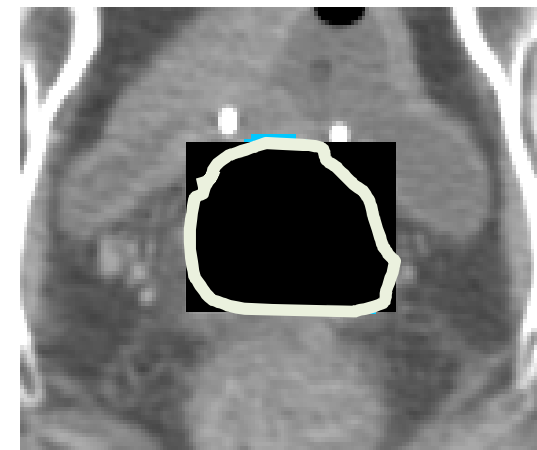
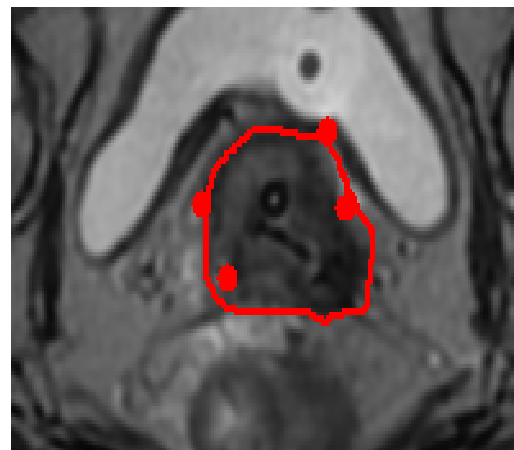
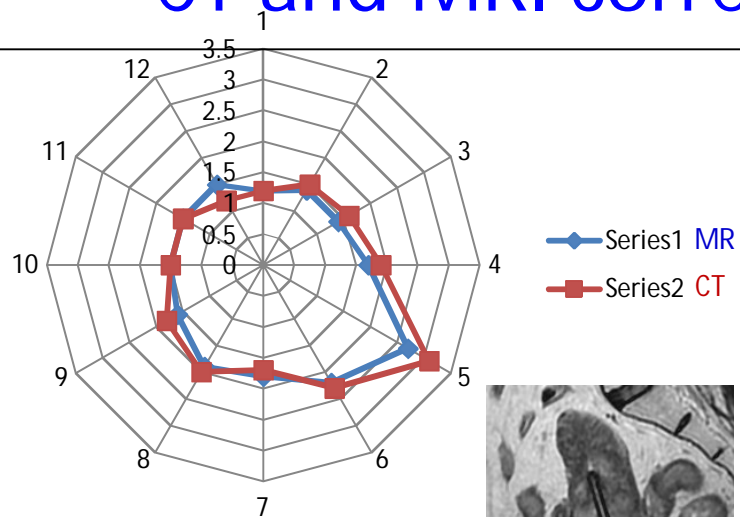
CT - BASED CONTOURING

Pre - requisites

- *Experience of MR Based Approach: Mandatory*
- *At Diagnosis: Clinical drawings, MR +/- CT*
- *At Brachytherapy: Standardization of the CT protocol*
 - *CT compatible applicators*
 - *bladder filling protocol with dilute contrast*
 - *Intravenous contrast*
- *Adopt the MR based definitions*



CT and MRI correlation: Ongoing Research



Volume 13 No 1-2 2013

ISSN 1473-6691 (print)
ISSN 1472-3422 (online)

Journal of the ICRU

ICRU REPORT 89

Prescribing, Recording, and Reporting Brachytherapy for Cancer of the Cervix

OXFORD
UNIVERSITY PRESS



OXFORD UNIVERSITY PRESS

INTERNATIONAL COMMISSION ON
RADIATION UNITS AND
MEASUREMENTS

PRESCRIBING, RECORDING, AND REPORTING BRACHYTHERAPY FOR CANCER OF THE CERVIX

Report Committee

R. Pötter (Co-Chairman), Medical University of Vienna, Vienna, Austria
C. Kirisits (Co-Chairman), Medical University of Vienna, Vienna, Austria
B. Erickson, Medical College of Wisconsin, Milwaukee, USA
C. Haie-Mader, Gustave Roussy Cancer Campus, Villejuif, France
E. Van Limbergen, University Hospital Gasthuisberg, Leuven, Belgium
J. C. Lindegaard, Aarhus University Hospital, Aarhus, Denmark
J. Rownd, Medical College of Wisconsin, Milwaukee, USA
K. Tanderup, Aarhus University Hospital, Aarhus, Denmark
B. R. Thomadsen, University of Wisconsin School of Medicine and Public Health, Madison, WI, USA

Commission Sponsors

P. M. DeLuca, Jr., University of Wisconsin, Madison, WI, USA
A. Wamborski, Université Catholique de Louvain, Brussels, Belgium
S. Bentzen, University of Maryland School of Medicine, Baltimore, MD, USA
R. A. Galbrauer, Ohio State University, Columbus, OH, USA
D. T. L. Jones, Cape Scientific Concepts, Cape Town, South Africa
G. F. Whitmore, Ontario Cancer Institute, Toronto, Canada

Consultants to the Report Committee

W. Dörr, Medical University of Vienna, Vienna, Austria
U. Mahantshetty, Tata Memorial Hospital, Mumbai, India
P. Petric, National Center for Cancer Care and Research, Doha, Qatar
E. Rosenblatt, International Atomic Energy Agency, Vienna, Austria
A. N. Viswanathan, Harvard Medical School, Boston, MA, USA

Consultants to the Report Committee

W. Dörr, Medical University of Vienna, Vienna, Austria
U. Mahantshetty, Tata Memorial Hospital, Mumbai, India
P. Petric, National Center for Cancer Care and Research, Doha, Qatar
E. Rosenblatt, International Atomic Energy Agency, Vienna, Austria
A. N. Viswanathan, Harvard Medical School, Boston, MA, USA

©ICRU 2016. All rights reserved.
This electronic file was provided to Richard Pötter
Single user authorization only, copying and networking prohibited.

Published in June 2016

TMH Journey: MR Image Guided Adaptive BT
TRANSITION FROM 2D TO 3D
SECRET TO A SUCCESSFUL JOURNEY!

- Attended the GYN Teaching Course: **Understand the Concepts**
- Hands on Workshop & Fellowships : **Atleast 1 – 2**
- Standardization of processes & Learning Curve : **15 - 25 pts**
- Transition to 3D: MR / CT +/- US
- Retrospective Analyses and Introspection
- Expert Mission and Audits
- Teaching / Hands on Workshops
- Prospective Research protocols