

RADIATION ONCOLOGY CHART DOCUMENTATION

Policy:

The Department of Radiation Oncology will provide staff with a complete understanding of the required documentation to be filed in the treatment charts on all patients receiving radiation treatments. This is to provide all staff with the knowledge of what is required in the treatment charts. The American College of Radiology guidelines pertaining to Chart Documentation will be used. This medical record shall be maintained according to hospital requirements and will be maintained in a confidential manner. No part of the chart will be released without the written consent of the patient. Charts will be maintained for a period of seven years.

Treatment charts will be kept on every patient who received radiation therapy. It will be mandatory that these records have adequate information. A person looking through these charts should be able to obtain in depth information pertaining to the exact portal treatment, duration of treatment, dose delivered, stage of disease, pathology record, etc. Use the same structured chart for both superficial and deep therapy.

1. Department will obtain copies of medical records documents and file in the treatment chart
 - a. Pathology report
 - b. Current laboratory data
 - c. Current x-ray report pertinent to the diagnosis
 - d. Operative notes
 - e. Progress notes
 - f. History and physical
 - g. Consultation
 - h. Follow-up reports
 - i. Clinic reports if available
 - j. Patient registration information
 - k. Any other documents physician requests

2. Department will obtain and file in treatment chart
 - a. Consent signed
 - b. Medical release form signed (good for 1 year)
 - c. Patient information sheet
 - d. Laboratory and Weight sheet
 - e. Treatment sheet
 - f. Photos
 - g. Nurse's assessment sheet
 - h. Check off sheet for chart completion
 - i. Patient education

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3. All patient seen on consultation will have a treatment chart constructed with the above documentation.
4. A separate radiation therapy record form is to be used for each patient and each course of treatment.
5. All prescriptions and daily treatment documentation in the record are to be done in black ink unless otherwise specified.
6. Errors in the record are to be corrected by crossing one line through the error and writing "VOID" and initial the correction(s). NEVER use correction fluid on the record.
7. Before treatment is given, there must be a written prescription for that treatment on the chart. If the physician initially gives a verbal or phone order, a radiation therapist must write the order in the chart. The physician must sign the verbal order within 24 hours according to hospital policy.
8. It is the radiation therapist's responsibility to check for new orders daily before treating the patient.

Procedure:

1. **I.D. Photo** – Nurses take a full face photograph of the patient on the consultation visit, move photographs from digital camera to IMPAC.
2. **Patient Information** – Patient is sent to patient processing for a complete registration. The patient will be give a registration sheet to be documented in the radiation therapy chart. A new patient information form should be completed each time a new chart is used.
3. **Chart Documentation at Consultation** – Nurses will obtain Medical Records and make copies of necessary document listed above.
4. **Patient Assessment** – Nurses will conduct patient assessment and complete patient assessment form and complete treatment sheet.
5. **Patient education** – Nurses ill conduct patient education and complete patient education form
6. **Diagnosis** - (physician) include the diagnosis, the stage of the disease, and any other important patient information.
7. **Tx. Course** - (physician) a plan of treatment each time a patient is treated is considered a new course.

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8. **Consultation and H&P** – (physician) a complete consult and H&P will be conducted by physician and documentation will be recorded in radiation therapy chart.
9. **Special Physician Request and Documentation-** (physician) any special consults or special needs will be addressed and documented by physician. The physician will instruct nurse to order consultation to outside services.
 - a. **Dentist: Consult Requested** - (physician) check if a dental consultation is desired.
 - b. **Dentist: Consult Done** - (dentist) after the initial consultation, check and initial next to the box.
 - c. **Dietitian: Consult Requested** - (physician) check if a nutrition consultation is desired.
 - d. **Dietitian: Consult Done** - (dietitian) after the initial consultation, check and initial next to the box.
 - e. **Social Worker: Consult Priority** - (physician) check if a social services consult is desired, and indicate priority. Initial consultation should be documented in social worker's notes.
 - f. **High-Risk Set-Up** - (physician, physicist, dosimetrist, or radiation therapist) check any time a patient's treatment set-up has a high potential for error.
 - g. **Pacemaker** - (physician) check if the patient has a pacemaker.
 - h. **Do Not Resuscitate** - (physician) check, date, and initial if the patient is not to be resuscitated in the event of cardiopulmonary failure. Affix a "DNR" sticker on the treatment parameter page.
10. **Brachtherapy Prescriptions** - brachytherapy prescriptions can be written in the brachytherapy record kept in the physics section of the radiation therapy chart.
11. **Treatment Prescription** - all information in this section is to be completed or signed by the physician prior to initiation of treatment. Therapist will not deliver any radiation treatments prior to written or verbal orders. If verbal orders are received, physicians will sign within 24 hours according to hospital policy. If the final dose or fraction is not known when the treatment prescription is written, indicate a limiting dose or fraction (e.g., ≥ 20 fractions or ≥ 4000 cGy); if the final determination is based on dosimetric calculations, write "TBD" (to be determined) in pencil until calculations are complete, then ink over final aim.

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- a. **Date** - record the month, day, and year of each entry.
- b. **Site** - indicate the specific anatomical site to be treated -- be specific since the treatment completion letters and daily tissue dose summations are filled out from this section of the prescription; the physicist or dosimetrist should be able to tell from the site information which fields contribute to which doses; for a field reduction, start the site designation with the original field and then write the reduction in parenthesis. Indicate if an area is receiving retreatment
- c. **Energy** - specify the beam energy for each site.
 - i. Energy - write 6 or 18 MV
 - ii. Energy - write 4, 6, 8, 10, 15, 22 MeV

If the patient will be treated with a combination of two energies, write both energies separated by a colon (e.g., XR 6:18); if unable to specify the energy initially, write "TBD" in pencil and erase and write in ink when a decision is reached. If different energies can be used depending on machine availability, write both energies separated by a slash (e.g., EB 15/18).

- d. **Dose Per Fx** - indicate the daily tumor dose in cGy; when supplementing a dose to a specific area, indicate the range. If the dose is changed at a later date, note a first change with an asterisk next to the dose per fraction and below where the new dose is written; note a second change by two asterisks. Changes require initials and date.
- e. **No. of Fx** - (physician) indicates number of fractions unless it is to be determined from a computer plan. After the plan is run, indicate number of Fx's determined from computer plan in pencil. When the physician signs he/she should overwrite in ink.
- f. **Tumor Dose** - specify the total tumor dose in cGy at which point field reductions will be made or the field will be stopped; if unable to specify, write "TBD" in pencil; when a decision is reached, erase and write it in ink (e.g., a maximum spinal cord dose less than 4500 cGy determined from computer plan or calculations).
- g. **Boost** - check if the site will continue with field reductions or boost fields; if a decision has not been made yet regarding the boost, put a question mark in pencil in this spot.
- h. **Depth** - indicate where the tumor dose is prescribed;
 - i. GD or depth (in cm) may be indicated if treatment is given with a single field.

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- ii. dose for multi fields can be prescribed as "5 cm from posterior" or "midline" (ML) or "ISO" if dose is prescribed at the isocenter;
- iii. designate an isodose plan from a contour or CT by "REF". "REF" implies that the tumor dose is defined on the isodose plan.
- iv. designate the depth for an electron beam field by "% isodose" or GD.

- i. **SSD or SAD** - specify SSD or isocentric technique.
- j. **Technique** - the field arrangement must be uniquely defined in this section. Specify the basic treatment technique (e.g. obliques, laterals, AP, PA,) and weighting information. Descriptions, such as laterals refer to the anatomical position. All techniques with more than two fields must include weighting information. This information may be written below the final aim section if necessary. If the physician is undecided regarding the weighting to be used, he/she should write "consider trying . . ." in the comment section below final aim or "weight such that kidney, cord, etc. doesn't exceed a certain dose".

If weighting information is written on the treatment chart by the physician, the physicist or dosimetrist will transfer this information to the treatment planning system for dose summation. When awaiting computer plan the physician could write: "weight according to computer plan" or "weight determined from computer plan".

- k. **Spinal Cord/Other** - write the maximum dose to critical organs or "NA" if not applicable or write "Protocol" to indicate we would use accepted protocol.
- l. **Final Dose** - indicate the final dose of treatment per site (e.g., pelvis - 4600 cGy, prostate 4600 + 1800 = 6400 cGy) so the dosimetrist will know which fields contribute to which site.
- m. These lines are used to denote unique changes or special orders (see Example V) such as BID treatment, bolus instructions, moving junctions, RTP scans, treatment with full bladder, pacemaker protocol, implant orders, and concomitant boost technique; start all orders written here with the site to which they pertain; do not write routine orders in this section.
- n. **M.D.** - initial all entries.

- 12. **Lab Work** – Weekly lab work will be conducted on radiation therapy patients, physician may waiver lab work desired and the frequency it is to be done. Initial lab results will be obtain at the time of consultation.

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13. **Simulation** – Technologist will document simulation procedures on treatment sheet. All coordinates for treatment immobilization devices will be recorded along with contrast procedures. Isocenters will be marked and tattooed prior to the patient being released.

14. **Field Parameters/Set-Up Instructions-** The physician, physicist, simulator technologist, radiation therapist, or dosimetrist may make entries on this page. Complete the "Treatment Field Parameters" section prior to initiation of treatment. Indicate the patient's ambulatory status at the top of this page (i.e., wheelchair, stretcher, walk-in).
Start a new treatment record for patients who have completed a course of radiotherapy and are returning for subsequent treatment to a different site.
(The same chart is used for split course treatments, i.e. two-week break.)
 - a. **Unit** - indicate the therapy unit used for the treatment field

 - b. **Energy** - specify the beam type and energy for the treatment field.

 - c. **Number and Lettering of Treatment Fields**
 1. designate number fields consecutively down the chart through all treatment courses. **DO NOT** start a second treatment chart with Field A unless it is a retreatment of a previous field using the same energy.

 2. Use the **SAME** field numbering with the addition on A,B,C, etc. when: (example 1A, 2A)
 - i. adding a wedge, block, or bolus to the original treatment field;
 - ii. there is a change in the dose to a field;
 - iii. a field is temporarily treated on an alternate machine due to machine breakdown or other problems; or,
 - iv. when using alternate wedges on the same field.

 3. Use a **NEW** number field when:
 - i. there is a permanent change of energy for treatment of a field;
 - ii. any field overlaps two or more previous fields; or,
 - iii. there is a change in the beam angle used to treat the same tumor site (e.g., obliques or laterals).

 4. All fields that have been completed should be dated out and

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highlighted in yellow.

- d. **Set-Up SSD** - record the target-to-skin distance used to set-up the field (write ODI reading in this space); indicate the set-up point under “Comments” if it is different from the CAX.
- e. **Field Description** - write a general description of the anatomical site of treatment, including the site and position (e.g., anterior pelvis, left lateral lung, medial tangent right breast, right lateral posterior cervical nodes); the description should correspond to the site written in the physician's prescription; obliques should be defined as medial and lateral, anterior and posterior, right and left (e.g., RAO, LPO); a right oblique refers to a field in which the gantry is angled towards the patient's right, and a left oblique refers to a field in which the gantry is angled toward the patient's left.
- f. **Patient positioning:** prone or supine, specific arm or leg positions, etc
- g. **Coll L/W Cone** - record the collimator settings as "y" "x" according to the collimator direction, not patient anatomy, asymmetrical jaws are recorded as; Y1, Y2, X1 and X2. Electron beam field size is indicated by cone size.
- h. **Gantry** - record the angle of rotation of the gantry.
- i. **Coll** - record the angle of rotation of the collimator; if a specific angle is not used, note the direction of rotation
- j. **Couch** - record the angle of rotation of the treatment couch.
- k. **HNS (Head and Neck Support)** - indicate the use of any type of pillow as follows:
 1. Molded pillow
 2. Face mask
 3. Wedge pillow
 4. Square pillow (indicate small, medium, or large)
 5. S-Frame
 6. U-Frame
- l. **BLK** - indicate the type of blocking used for the field as follows:
 1. Custom block
 2. Hand block
 3. Satellite block
 4. Insert for electron beam cone

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- m. **Wedge position** – Therapist must review plan to confirm correct wedge direction prior to delivery of treatment.
- n. **Wedge** - record the angle of the wedge in degrees (e.g., 15°, 30°); if a wide wedge is used, put a "W" after the wedge number (e.g., 15°W, 30°W); for a combination of wedges, divide the space allowed in two.
- o. **Bolus** - indicate the thickness of bolus for each field and document position in instructions column or with photos.
- p. **Monitor Units** - record the amount of monitor units (setting on the machine console) required to deliver the prescribed dose.
- q. **Start TX Date** -record the month, day, and year of the first treatment of the field.
- r. **Stop TX Date** - record the month, day, and year of the last treatment of the field. Confirm prescribed dose matches dose delivered and turn chart into physics for the last chart check.
- s. **Instructions** - include instructions regarding the position and set-up of this field in IMPAC:
 - 1. General description of the patient's position (e.g., supine, prone, true lateral, open neck)
 - 2. Tongue blades, mouth stents, dentures in or out
 - 3. Aquaplast, alpha cradle, wingboard, medtech
 - 4. Knee pillow and size
 - 5. Bolus - position
 - 6. Feet taped
 - 7. Bellyboard
 - 8. Tiltboard, armboard,
 - 9. Cerrobend mask
 - 10. Lead strips, lead circles and size, beam degrader
 - 11. Foot board with hand restraints
 - 12. Bite block
 - 13. Additional Comments (e.g., empty bladder before treatment, bite block numbers, treat with full bladder, tape buttocks); always date the entry and designate the fields.

15. Recording Daily Treatment Delivery

- a. **New Orders** - (physician) check this box to alert the radiation therapist to a change in orders.
- b. **Day** - (radiation therapist) use this column to indicate day of the week treatment takes place.

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- c. **Date** - (radiation therapist) record the month and day; dates in Monday through Friday blocks. BID treatments should be entered on two lines denoted by a.m. or p.m. in the BID column.
- d. **Year** - record the year treatment begins.
- e. **FX No** - (radiation therapist) record the number of treatment days since the first treatment. BID treatments should be counted as two fractions.
- f. **BID Time** - (radiation therapist) enter the time of day that patient is treated here to document at least six hours of separation between treatments.
- g. **WM & QA** - (radiation therapist) initial after chart check has been done and weekly management and/or physics QA is charged appropriately.
- h. **Comments** - (physician, dosimetrist, radiation therapist) include instructions or comments for a specific day (e.g., port films, off-cord, boost); these must be read before treatment. All portal images of all fields should be documented.
- i. **Parameter Change** - check this column and document change for each field on the treatment parameter history for any field that has minor changes, they do not require a new field letter
- j. **Therapist Initials** - (radiation therapist) - initial if involved in the patient's treatment.
- k. **Weight** - (Nurses) patients are to be weighted weekly.
- l. **CBC Ordered** - (radiation therapist) initial when the patient is given a blood slip based on instructions from physician's orders.
- m. **CBC Obtained** (Nurses) - initial when results are obtained and documented on CBC results log.
- n. **Physics Chart Check**- (physicist, dosimetrist) initial in after the weekly dosimetry check
- o. **Field Numbers and Lettering** - (physicist, dosimetrist, radiation therapist) corresponds with the field letter on write the anatomical site.
- p. **Energy** - (dosimetry) document energy used on each field.
- q. **Description** - (dosimetry) document a brief description of each field.

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- r. **MU** - (radiation therapist) record the monitor units delivered after actual treatment to each field is completed.
 - s. **Given Dose** - (physicist or dosimetrist) write in pencil the projected dose in cGy to the calculation point at the beginning of treatment; Rewrite in ink doses written in pencil after the dose is given. Planned aim is dosed for the prescribed number of treatment days and is marked by the final sum of GD and/or stop at the end unless a field reduction or boost is planned.
 - t. **Sum Given Dose** - (radiation therapist) write the cumulative dose in cGy given to the site after the dose is delivered.
 - u. **Bolus** - (radiation therapist) if a bolus is used, enter a "B" or indicate thickness of bolus used on a particular field, i.e., .5 or 1.0) in this column; if a bolus will be used on some but not all days of treatment, indicate in pencil which days the bolus will be used; (radiation therapist) write over the "B" or thickness in ink after the bolus is used. Write specific instructions regarding the bolus under "Comments" on the "Field Parameters/Set-Up Instructions" page.
 - v. **Wedge** - (radiation therapist) indicate size wedge used. Therapist will describe wedge use on "Field Parameter Set-up Instruction" page. If a wide wedge is used, put a "w" after the wedge number (e.g., 15w, 30w).
 - w. **NOTE: BID Treatments** - (therapist) write the same date on two lines, with one marked "AM" and one "PM".
16. **Physics Treatment Plan** (physicist. Dosimetrist)
- a. **Date** - record the month, day, and year that the calculation is initially used.
 - b. **Field** - record the field letter(s) for the site of calculation.
 - c. **Field Description** - record the anatomical site of the calculation.
 - d. **Unit** - record the therapy unit used for the treatment field(s)
 - e. **Energy** - record the beam type and energy for the treatment field(s)
 - f. **SAD (Source Axis Distance)** - record SAD isocentric technique
 - g. **SSD (Source Skin Distance)** - record SSD technique

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- h. **FS_{coll};Cone (Field Size - Collimator)** - record the field sizes from the collimator (read out and equivalent square OR indicate electron beam cone).
- i. **FS_{eff};Insert (Effective Field Size)** - record the size of the area being irradiated in a blocked area and equivalent square if applicable.
- j. **Depth** - record the depth where the dose is prescribed.
- k. **TD** - record the tumor dose as prescribed by the physician for this site.
- l. **Weighting** - record the relative contribution of each field in a multiple field situation (i.e. 120:90:90, PA:Rt:Lt or 3:2, A:P)
- m. **DD; TMR (Depth Dose; Tissue Maximum Ratio)** - record the % DD or TMR for effective square at the depth of calculation.
- n.. **ISQ_{iso} (Inverse Square, Isocenter)** - use with isocentric calculations.
- o. **Reference Dose** - record the reference dose from the computer printout.
- p. **Rx Level** - record the treatment isodose line that physician chooses from the computer printout.
- q. **Given Dose** - record the dose at the calibration point .
- r. **Tray factor or Air Gap** - record the blocking tray transmission factor for photons; air gap for electrons.
- s. **Insert Factor** - record the correction factor for electron cone inserts.
- t. **S.F. - (scatter plate factor)** record scatter plate factor.
- u. **ISQ (Inverse Square)** - record the inverse square correction factor when an increased or decreased TSD is used.
- v. **MU_{open} (Monitor Units, Open)** - record the monitor units using no wedge factor.
- w. **WF (Wedge Factor)** - record the transmission factor for a wedge and the wedge angle (i.e., 15°/.722).
- x. **MU_w** - record the monitor units with wedge factor included.
- y. **MU Calc check** - write in mu verified by computer calculation.

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- z. **Calc. By/Checked By** - initial after doing original calculation/initial after making an independent check of the calculation.

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