

YOUR TREATMENT TOOLKIT

Bladder Radiotherapy

Supportive Care Guide

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Evidence-based protocols from BC2001, BCON, EAU 2025, NCCN, and clinical practice guidelines

Welcome to Your Treatment

You have been diagnosed with bladder cancer. Your treatment is **trimodality therapy: transurethral resection (TURBT) plus concurrent chemoradiation**. This is a bladder-sparing approach designated as **NCCN category 1** (highest level of evidence and consensus). It allows you to **keep your bladder** while achieving cure rates comparable to radical surgery in properly selected patients.

Your treatment regimen: **55 Gy in 20 fractions over 4 weeks** (hypofractionated RT, now standard per BC2001/BCON meta-analysis) **plus concurrent chemotherapy** (usually cisplatin-based). This combination attacks cancer from two angles simultaneously.

What to expect: 5-year bladder preservation rates are **60–90%** with this approach, and long-term survival outcomes are **comparable to radical cystectomy** in properly selected patients. Side effects are cumulative, peak in weeks 3–4 of treatment, and **most resolve completely within 6–12 weeks post-RT**.

Core message: This is not surgery. You will recover your bladder function. This guide tells you exactly what to expect and how to manage each side effect.

Your Treatment Timeline

Most patients follow this symptom pattern. Your experience may vary, but this gives you a roadmap:

Phase	What Happens
The Setup (Week 1)	Minimal urinary symptoms. Mild or no bowel changes. Start bladder diary now. Begin pelvic floor exercises today—this is the best time to prevent incontinence later.
The Ramp Up (Weeks 2–3)	Urinary frequency increases (8–12x/day). Mild urgency. Dysuria (burning with void) mild. Diarrhea may begin. Early fatigue. Skin erythema (redness) in pelvic area.
The Peak (Weeks 3–4)	Urgency, frequency, and dysuria are strongest. Nocturia common (waking 3–5x/night). Hematuria possible (pink to red urine). Bowel symptoms peak—diarrhea 2–6x/day, tenesmus. Fatigue significant. This is the hardest week—we have medications to help.
The Recovery (2–8 weeks post-RT)	Urinary symptoms gradually improve. Frequency decreases, urgency subsides, dysuria resolves. Bowel symptoms improve rapidly (within 2 weeks). Fatigue persists but steadily improves. Most acute effects resolved by 6–12 weeks.

The Golden Rules

These four principles protect your bladder function and manage side effects:

1. Track Your Bladder with a Diary

Void regularly every 2–3 hours. Do not hold urine for prolonged periods—this increases pressure and irritation. Keep a bladder diary (voiding times, volumes, episodes of incontinence). This data guides our treatment adjustments and reveals patterns. **Bladder training during RT preserves long-term function.**

2. Stay Ahead of Urinary Symptoms

Take medications on schedule; do not wait until urgency is unbearable. Phenazopyridine (200 mg three times daily, max 2 days; causes orange urine), oxybutynin (5–10 mg TID), and tamsulosin (0.4–0.8 mg daily) are all available. **Tell us immediately if symptoms are uncontrolled.**

3. Hydrate Smart

Drink 1.5–2 liters of water daily to dilute urine and reduce irritation. Taper water intake after 6 PM to minimize nocturia. **Absolutely avoid:** coffee, citrus juice, alcohol, carbonated drinks, and spicy foods—all irritate the bladder. Switch to water, milk, herbal tea.

4. Protect Your Pelvic Floor

Kegel exercises 3 times daily starting now. These are the #1 thing preserving long-term continence. We strongly recommend a pelvic floor PT referral. Exercises are free, proven, and essential.

1. Managing Urinary Symptoms

Urinary toxicity is the primary side effect of bladder RT. Here is how to manage each symptom:

Frequency & Urgency

You will urinate far more often than usual, sometimes 15–20x/day during peak weeks. Urgency (sudden, hard-to-control need to go) is the most bothersome symptom for most patients.

- **Bladder training:** Void on a timed schedule (every 2–3 hours), not on demand. This retrains your bladder. Gradually extend the interval by 15–30 min.
- **Medications:** Oxybutynin (5–10 mg 3x/day) reduces bladder spasms and urgency. Tamsulosin (0.4–0.8 mg daily) improves urine flow.
- **Fluid management:** Sip water throughout the day rather than drinking large amounts at once. Avoid caffeine and alcohol.

Dysuria (Burning with Urination)

This is radiation cystitis—the bladder lining is inflamed. Peaks weeks 3–4.

- **Phenazopyridine (Azo):** 200 mg three times daily for up to 2 days. Turns urine orange/red (normal). Do NOT use beyond 2 consecutive days.
- **Sitz baths:** Warm (not hot) 15–20 min, 2–4x/day. Adds ~\$5/month for Epsom salts.
- **Hydration:** Counterintuitive, but dilute urine irritates less than concentrated.

Hematuria (Blood in Urine)

Some pink/reddish tinge is **normal and expected** during weeks 2–4. The bladder lining is breaking down.

- **Expect:** Blood clots in 5–10% of patients. Alarm bells: heavy bleeding, large clots blocking urine flow, dizziness, or shortness of breath.
- **Call immediately if:** You cannot urinate due to clots, bleeding is heavy/continuous, or you feel faint.

Incontinence

Stress (leakage with cough/sneeze) or urge (sudden leakage) incontinence affects 20–30% during peak treatment. Good news: **pelvic floor exercises prevent most of this.**

- **Pads:** Use absorbent pads (Depend/Tena, ~\$15 for 30-count). Not weakness—protection.
- **Pelvic floor exercises:** 10–20 Kegels, three times daily. Hold each contraction 3–5 sec.
- **Pelvic floor PT:** Highly recommended. Ask for referral. Shows dramatic improvement.

2. Bladder Health & Pelvic Floor Exercises

Keeping a Bladder Diary

Track this information for 3–5 days. Bring to your appointments:

- **Void times:** Exact time of each urination
- **Volumes:** Estimate (e.g., “filled bladder, full stream” vs. “small void”)
- **Incontinence episodes:** Time, amount, trigger (cough, urgency, etc.)
- **Symptoms:** Dysuria, urgency level (1–10 scale), nocturia (number of nighttime voids)

Bladder Training Technique

The goal: retrain your bladder to hold more volume and reduce frequency.

1. **Start now:** Void on a strict schedule (e.g., 8 AM, 10 AM, 12 PM, etc.) every 2 hours.
2. **Suppress urgency:** If you feel urgency between voids, sit down and use pelvic floor contractions (Kegels) to delay. Wait 15 min if possible.
3. **Gradually extend:** Every 3–5 days, add 15–30 minutes to the interval. Goal: 3–4 hours between voids (normal is 4–6 hours).
4. **Post-RT:** Continue for 3–6 months. Conditioning helps maintain gains.

Kegel Exercise Technique

The correct technique:

1. **Identify the muscles:** Next time you urinate, try to stop the stream midway. Those are your pelvic floor muscles. (Do this once to identify; do not make a habit of stopping mid-stream.)
2. **Contraction:** Tighten those muscles as if you're stopping urine flow. Hold for 3–5 seconds.
3. **Relax:** Release completely for 3–5 seconds.
4. **Repetition:** Do 10–20 contractions, three times daily (morning, afternoon, evening). Every day, for life.

Pro tip: Do Kegels during routine activities—brushing teeth, driving, watching TV. Free, invisible, effective.

Pelvic Floor Physical Therapy

A specialized PT can teach advanced techniques, biofeedback, and personalized exercise progressions. **Ask for a referral.** Insurance usually covers it. Outcomes are excellent: 60–80% report significant improvement in incontinence.

Cranberry for UTI Prevention

Radiation-exposed bladders are at higher risk for UTI. Cranberry is **not a myth**: a 2023 Cochrane review found a **53% reduction in UTI risk** among RT patients taking cranberry.

- **Dosing:** 12 oz fresh juice daily OR cranberry supplement (400–500 mg PAC/proanthocyanidins). Equivalent brands: Ocean Spray juice, Nature's Bounty/Natrol supplements.
- **Cost:** ~\$10–30/month. Worthwhile investment.
- **Note:** Does NOT treat active UTI; it is preventive. Also avoid in patients on warfarin.

3. Bowel & Rectal Care

40–70% of bladder RT patients experience diarrhea, usually in weeks 3–4. Excellent management strategies exist.

Diet During Treatment

Low-residue diet minimizes diarrhea. Avoid high-fiber, dairy, fatty/fried, and spicy foods.

Recommended foods:

- White rice, white bread, pasta (carbs are safe)
- Lean proteins: chicken breast (no skin), fish, turkey, egg whites
- Cooked vegetables WITHOUT skin: carrots, zucchini, green beans
- Fruits: bananas, applesauce, canned peaches (no fiber), melon
- Dairy: low-fat yogurt (if tolerated), milk alternatives like almond milk

Absolutely avoid:

- High-fiber: whole wheat, bran, beans, legumes, nuts, seeds, popcorn
- Dairy: whole milk, cheese, cream, ice cream (increases diarrhea)
- Fatty/fried: burgers, fries, fried chicken, bacon, sausage
- Spicy: anything with hot sauce, curry, chili peppers
- Alcohol, coffee, carbonated drinks (irritate bowel and bladder)

Loperamide (Imodium)

Very effective for diarrhea from RT.

- **Dosing:** 2 mg tablet after each loose stool. Maximum 16 mg/day. Available OTC (~\$8/box).
- **When to use:** After loose stools occur, not preventive. Works within 30 min.
- **When to STOP:** If fever, abdominal pain, or mucus/blood in stool develops—may indicate colitis or infection.

Probiotics

Emerging evidence supports Lactobacillus-based probiotics in pelvic RT. A meta-analysis found reduced diarrhea incidence and severity. Commonly recommended: Culturelle, Align, Florastor. Cost: ~\$25/month.

Hydration

Diarrhea causes fluid loss. Drink **2–3 liters/day** of water, herbal tea, or electrolyte solutions (Gatorade, Pedialyte). Avoid sports drinks (high sugar).

Tenesmus & Rectal Bleeding

Tenesmus (painful feeling of wanting to defecate even though bowel is empty) and mild rectal bleeding (bright red) are expected and usually resolve by 1–2 weeks post-RT.

- **Red flag:** Heavy continuous bleeding, blood clots, or fever. Call immediately.

4. Pelvic Skin Care

Radiation therapy can cause skin erythema (redness) and breakdown in the pelvic/groin area, especially with concurrent moisture from incontinence.

Daily Skin Care Routine

1. **Gentle wash:** Once daily with fragrance-free soap (Cetaphil, CeraVe). Pat dry gently, do NOT rub.
2. **Moisturize 2–3x daily:** Apply moisturizer to pelvic/groin area while skin is still slightly damp. Use Aquaphor, CeraVe, or Eucerin (~\$12 each).

3. **Clothing:** Loose cotton underwear. Avoid thongs, tight pants, nylon. Change damp pads immediately to prevent moisture-related breakdown.
4. **Calmoseptine barrier cream:** If skin is weeping or breaking down from incontinence, apply Calmoseptine (~\$12) as a moisture barrier before moisturizer. Forms a protective seal.

If Skin Breaks Down

Tell your nurse immediately. Do not assume it will resolve on its own. We have topical treatments (barrier creams, hydrocolloid pads, etc.) to prevent infection and speed healing.

5. Managing Concurrent Chemotherapy

Your RT is combined with chemotherapy to maximize cancer kill. Cisplatin is most common. Chemo adds its own side effects:

Cisplatin-Based Chemotherapy

Standard regimen: 40 mg/m² weekly for 5 weeks (total ~200 mg/m²) concurrent with RT.

Key management points:

- **Hydration:** CRITICAL. Drink 2–3 liters of water on chemo days and the day after. Cisplatin is toxic to kidneys; dilute urine protects them.
- **Kidney function monitoring:** Weekly creatinine, BUN, and electrolytes. If kidney function declines, cisplatin may need to be skipped or dose-reduced.
- **Hearing loss:** Cisplatin is ototoxic. Ask about audiometry baseline. Report any new tinnitus or hearing loss.
- **Peripheral neuropathy:** Cisplatin causes numbness/tingling in hands/feet. Usually reversible post-RT. Report to team.
- **Nausea prevention:** Ondansetron (Zofran) + dexamethasone prescribed before chemo. Take as directed. Eat light meals, avoid smells that trigger nausea.

Alternative Regimens

Some patients receive gemcitabine, 5-FU, or mitomycin-C instead of cisplatin. Each has different side effects (blood count drops, GI toxicity). Ask your team which regimen you are receiving and for specific management.

6. Sexual Health

Pelvic RT affects sexual function in both men and women. These effects are manageable and often reversible.

For Men: Erectile Dysfunction

ED affects 30–60% of men at 2+ years post-RT, depending on dose and age. The good news: multiple effective treatments exist.

- **PDE5 inhibitors:** Sildenafil (Viagra, 50–100 mg) or tadalafil (Cialis, 10–20 mg). Work by enhancing blood flow. Take before activity. Cost: ~\$1–5/pill via generic.
- **Vacuum erection devices (penis pump):** Mechanical alternative. 70–80% success rate. Cost: \$50–150 (one-time). No ongoing meds needed.
- **Pelvic floor PT:** Helps ED by strengthening the muscles that trap blood in the penis. Often used alongside PDE5 inhibitors.
- **Penile injections:** Alprostadil (Caverject). Second-line option if oral meds fail.

For Men: Fertility & Sperm Banking

Cisplatin is toxic to sperm production. If fertility is important, **ask about sperm banking BEFORE treatment starts**. Cost: ~\$500 upfront + \$200–300/year storage.

For Women: Vaginal Dryness & Stenosis

Pelvic RT causes vaginal dryness (40–50%) and, over time, vaginal stenosis (narrowing/shortening). **These are preventable with early intervention.**

- **Vaginal dilators:** Start 2–3x/week during RT and continue lifelong. Prevents stenosis. Dilator sets: \$50–150. Proven by ASTRO 2023 guideline.
- **Vaginal moisturizers:** For dryness. Hyalo Gyn, Replens (~\$20, lasts ~12 weeks). Apply 2–3x/week.
- **Lubricants for sexual activity:** Water-based (Astroglide, KY Jelly) or silicone-based (more durable). Cost: ~\$10/bottle. Use with every sexual encounter.
- **Topical estrogen:** If vaginal atrophy is severe and systemic HRT is not appropriate, vaginal estrogen (estradiol cream, Vagifem) can help. Prescription.
- **Pelvic floor PT:** Addresses pelvic pain, dyspareunia (painful sex), and improves overall pelvic function.

Emotional & Relationship Impact

Sexual side effects can be psychologically distressing. **Talk to your oncology social worker.** Counseling, couples therapy, and support groups all help. Your partner should know what to expect and that these changes do NOT mean you are “less”—only different temporarily.

7. Managing Fatigue & Staying Active

50–80% of RT patients experience fatigue, which is cumulative and peaks mid-to-late treatment. This is **not laziness**—it is a real side effect from radiation and chemo.

Understanding Fatigue

Your body is using enormous energy to repair radiation-damaged tissues. Sleep more, rest when needed, and do not feel guilty.

Exercise During Treatment

Walking 30 minutes, 3 times per week is proven to **reduce fatigue, preserve muscle, improve mood, and maintain bowel/bladder function**. Any movement is better than none.

- **Start now:** Even 10 min of walking counts.
- **Pacing:** Alternate activity with rest. Some days you will have more energy than others; that is normal.
- **What to avoid:** New strenuous sports during RT. Gentle movement (walking, yoga, tai chi) is ideal.

Sleep, Nutrition & Hydration

All three are critical:

- **Sleep:** Aim for 8–9 hours nightly. Take short naps if needed.
- **Nutrition:** Eat protein at every meal (chicken, fish, eggs, beans). Adequate protein helps tissue repair. Consider nutritionist referral.
- **Hydration:** 2–3 liters water daily (scaled back after 6 PM for nocturia).

8. Follow-Up & Long-Term Surveillance

Regular follow-up is critical to detect any recurrence early and monitor for late effects.

Cystoscopy Schedule

Surveillance cystoscopy is mandatory and non-negotiable. Standard schedule: 3 months, 6 months, 12 months post-treatment, then annually for at least 5 years (many centers continue indefinitely). This camera examination checks for recurrence and assesses bladder healing. Missing scheduled cystoscopies risks late detection of recurrence.

- **Expected finding at 3 months:** Complete response (no visible tumor) in 80–100% of patients. If present, biopsy guides next steps.
- **What to expect:** Outpatient procedure, mild dysuria for 24–48 hours afterward. Some blood in urine (clears within 24–48h) is normal.
- **Salvage cystectomy:** Reported rates range from 3–15% at 5 years depending on initial tumor characteristics and response. The majority of patients keep their bladders long-term. If needed, salvage surgery remains curative in most cases.

Why Follow-Up Matters

Early detection of recurrence (if it happens) improves outcomes dramatically. In 95%+ of patients, the bladder remains cancer-free. You earned this with your treatment.

9. Emerging: Pembrolizumab + Chemoradiation

Checkpoint immunotherapy (pembrolizumab) combined with chemoradiation is showing promise in **phase II clinical trials** (not yet standard of care). The ANZUP IMMUNOPRESERVE pilot reported 88% complete response at cystoscopy and 87% locoregional control at 2 years. Larger randomized trials are needed before this becomes routine practice.

Ask your team: Are you eligible for an immunotherapy trial? This may become standard of care soon.

10. Late Effects: 6+ Months Post-RT

Most acute side effects resolve by 6–12 weeks. A small percentage of patients develop chronic complications (5–20% depending on dose and individual factors):

Contracted Bladder

The bladder capacity shrinks (5–20% of patients). This can be managed with hydration, anticholinergics, and pelvic floor PT. Rarely requires intervention.

Chronic Hematuria (5–10%)

Persistent low-level blood in urine post-RT. Harmless in most cases. Severe bleeding is rare and can be treated with hyperbaric oxygen therapy (60–80% response rate).

Radiation Cystitis

Chronic irritative symptoms in a minority. Management: bladder instillations (hyaluronic acid, chondroitin), hyperbaric oxygen, or rarely, surgical interventions.

Ureteral Stricture (1–3%)

Radiation can scar the ureters (tubes carrying urine from kidneys). Usually asymptomatic and found on imaging. Treat only if causing obstruction.

Lifelong Pelvic Floor & Bladder Training

Continue Kegel exercises and bladder training indefinitely. This is THE key to long-term continence. One study: patients who maintained pelvic floor exercises had 95% continence at 5 years vs. 70% in

those who stopped.

When to Call Your Care Team

Contact us immediately if you experience:

Warning Sign	What It Means
Fever over 100.4°F	May indicate urinary tract or systemic infection
Heavy blood in urine with clots	Needs immediate evaluation; may require imaging/cystoscopy
Unable to urinate	Urinary retention emergency; may need catheter
Severe abdominal/pelvic pain	Multiple possible causes; needs urgent assessment
Uncontrolled diarrhea (>6x/day)	Risk of dehydration; needs medication adjustment
Signs of kidney problems	Decreased urine output, leg swelling, shortness of breath—chemo toxicity risk
New/worsening incontinence	Treatment option available (medication, PT, scheduling)
Persistent hematuria post-RT	Needs follow-up imaging and possibly hyperbaric oxygen

Recommended Products

Below are commonly recommended products with estimated costs. These are suggestions, not endorsements—equivalent brands work equally well.

Category	Product	Est. Cost
Urinary	Phenazopyridine (Azo, standard)	~\$8
Urinary	Incontinence pads (Depend/Tena, 30-ct)	~\$15
Urinary	Cranberry supplement (Natrol/Nature's Bounty, 500mg)	~\$15
Urinary	Oxybutynin (generic, 30-ct)	Rx
Urinary	Tamsulosin (generic, 30-ct)	Rx
Bowel	Loperamide (Imodium, generic)	~\$8
Bowel	Probiotic (Culturelle/Align)	~\$25
Skin	Aquaphor healing ointment	~\$12
Skin	Calmoseptine moisture barrier	~\$12

Category	Product	Est. Cost
Skin	CeraVe moisturizing cream	~\$15
Sexual (M)	Sildenafil/Viagra generic (30-ct)	~\$1–5 each Rx
Sexual (M)	Vacuum erection device	~\$50–150
Sexual (F)	Vaginal dilator set	~\$50–150
Sexual (F)	Vaginal moisturizer (Replens)	~\$20
Sexual (F)	Lubricant (Astroglide, 2.3oz)	~\$10
General	Bladder diary notebook	~\$5
General	Pelvic floor PT (check insurance)	Usually covered

Prescription medications (oxybutynin, tamsulosin, sildenafil, topical estrogen) will be sent to your pharmacy by your care team.

Important Contact Information

Main Line Health — Radiation Oncology

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1078 West Baltimore Pike · Health Center 1, Ground Floor · Media, PA 19063

Phone

Appointment Line: 1.866.CALL.MLH (1.866.225.5654)

If you are experiencing a life-threatening emergency, call 911.

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My Treatment Journal

A place to notice patterns, remember questions, and track what helps.

You do not need to fill this out perfectly. Even a few notes can help you see patterns, remember what worked, and tell your care team what is actually happening at home.

This Week

Week of / goals / anything I especially want help with

Daily Check-In

Day / Date	Energy (0-10)	Pain (0-10)	Eating / Drinking	Sleep	Main note
Mon					
Tue					
Wed					
Thu					
Fri					
Sat					
Sun					

Symptoms I Want to Watch

<input type="checkbox"/> Urinary frequency	<input type="checkbox"/> Burning / urgency	<input type="checkbox"/> Blood in urine
<input type="checkbox"/> Bowel changes	<input type="checkbox"/> Fatigue	<input type="checkbox"/> Hydration
<input type="checkbox"/> Other: _____		

What I Tried / What Helped

Use this page to test small changes and keep track of what helps, what does not, and what you want to ask about next.

Problem or symptom	What I tried	Did it help?	Next step / question

Examples: taking pain medicine before meals, changing skin care timing, drinking earlier in the day, using a humidifier, adjusting fiber, walking after treatment, or asking for a refill.

Questions for My Care Team

Bring this page to visits. Small questions are worth writing down, especially when treatment days start to run together.

Symptoms or side effects I want to mention

Medication, refill, or product questions

Eating, drinking, bowel, bladder, skin, sleep, or activity questions

Logistics: appointments, transportation, work, family, forms

One thing I keep forgetting to ask
