



PATIENT EDUCATION

Osteoarthritis & low-dose radiation therapy

A plain-language guide for patients and families. Bring this to your visit. It does not replace advice from your clinician.

What is osteoarthritis?

Osteoarthritis (OA) is the most common form of arthritis. Cartilage that cushions the ends of bones wears down over time. Joints can become painful, stiff, and swollen — often knees, hips, hands, spine, or feet. OA usually progresses more slowly than inflammatory diseases such as rheumatoid arthritis.

What you may notice

- Pain that worsens with activity and eases with rest (early on)
- Stiffness after sitting or first thing in the morning (often under 30 minutes)
- Swelling, grinding, or reduced range of motion
- Trouble with stairs, walking, gripping, or sleep because of pain

First-line care for everyone

Guidelines emphasize **education**, **exercise / physical therapy**, and **weight management** when appropriate — before or alongside medicines and procedures. Low-dose radiation is one additional option for selected patients.

Where CureRays may fit. For selected patients with symptomatic OA, CureRays offers **low-dose image-guided / depth-enabled radiation therapy (DEEP-SRT™)** aimed at calming joint inflammation and reducing pain without surgery. Your radiation + medicine team decides if it is appropriate for you.

What treatment usually involves

- Consultation and imaging review to confirm the joint and rule out other causes of pain
- A short series of outpatient sessions — each visit is typically brief
- Custom **immobilization** (a mold, cushion, or brace) so the joint stays still and the beam stays on target
- No cutting and no surgical scar; you go home the same day
- Continued exercise, medicines, or other joint care as your team recommends

Immobilization — why it matters

During each session the team positions the joint carefully. A soft mold, vacuum cushion, or simple brace may be used so you do not move while the machine delivers the planned dose. Immobilization is for **accuracy and safety**, not because the joint is casted for weeks afterward. You can usually resume normal light activity the same day unless your clinician says otherwise. Custom devices are often kept on file in case a later course is considered.



Side effects you should know about

Low-dose joint radiation uses a small fraction of cancer treatment doses. Many patients report little day-to-day disruption, but you should still plan for the following:

- **Fatigue.** Mild tiredness can occur during or for a few days after the course. Rest, hydration, and pacing usually help. Call if fatigue is severe or unexpected.
- **Possible flare.** Some people notice a temporary increase in joint pain, stiffness, or swelling in the days after treatments (a “flare”). This often settles; use the comfort plan your clinic gives you (ice, elevation, approved pain medicine). Contact us if pain is severe, one-sided swelling is sudden, or you have fever.
- **Skin.** Mild redness or warmth over the treated area can occur and usually fades.
- **Rare / serious.** Fever, rapidly worsening swelling, calf pain with swelling, chest pain, or neurologic changes need urgent care — these are not typical of low-dose joint therapy and may signal another problem.

Odds of success — what a major Korean trial found

A multicenter randomized, sham-controlled trial in South Korea — **LoRD-KNeA** (Low-dose RaDiation therapy for patients with KNeE osteoArthritis; ClinicalTrials.gov NCT05562271) — studied adults with mild-to-moderate knee OA (Kellgren-Lawrence grade 2–3). Results were presented at ASTRO 2025. Patients received six sessions and did not know whether they got real or sham treatment.

70% Responders at 4 months with 3 Gy total (6 × 0.5 Gy)	42% Responders at 4 months with sham (placebo) treatment	~0* Treatment-related toxicity reported in the trial*
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Responder = meaningful improvement by OMERACT-OARSI criteria (pain, function, and/or patient global). A very-low 0.3 Gy arm was **not** clearly better than sham. Clinically meaningful WOMAC improvement (≥ 16) was more common with 3 Gy (about 57%) than sham (about 31%). *Trial authors reported no treatment-related toxicity in the short-term analysis; individual clinics still counsel about fatigue and flare as above. Long-term follow-up is ongoing. These figures are research results — not a promise of your personal outcome.

What this means for you at CureRays

LoRD-KNeA supports the idea that a carefully chosen low-dose course can help a substantial share of people with mild-to-moderate knee OA beyond placebo — roughly seven in ten met responder criteria at four months with the 3 Gy regimen in that study, versus about four in ten with sham. Your joint, imaging grade, other treatments, and goals may differ. CureRays will explain expected benefit, immobilization, and side-effect plans for **your** case.

Questions to ask

- Am I more like the mild-to-moderate knee OA patients studied in LoRD-KNeA?
- What success rate should I expect for my joint — and how will we measure it?
- How will you immobilize my joint, and what should I do if I get a flare or fatigue?
- What else should I continue (exercise, weight, medicines) during and after radiation?

How to schedule or learn more

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Important. Educational only — not a diagnosis, prescription, or guarantee. Radiation decisions require a clinician who knows your history, exam, and imaging. Source for trial figures: LoRD-KNeA (NCT05562271), ASTRO 2025 short-term results (Kim et al., Seoul National University Hospital / collaborating Korean centers). © 2026 CureRays Global Inc. · Keep Cancer Away® · Keep Arthritis Away® · Printout v3 (logo aspect fixed)