

Low-dose radiation therapy for treatment of osteoarthritis

- ✓ Typically six treatments over 2-3 weeks
- ✓ 80–90%* of the cost is covered by Medicare

*Depending on the individual's position within their Medicare Safety Nets. For Medicare-eligible patients only.



Low-dose radiation therapy (LDRT) is a non-invasive option for patients seeking effective relief when surgery is not an option and traditional treatments are no longer useful.¹

Clinical evidence

Over 4,000 patients in retrospective clinical trials and over 1,100 patients in prospective clinical trials²

63–90% of patients report a reduction in pain, with no acute side effects²

Over 62% of patients showed a persistent pain response at 38 months²

No evidence to suggest LDRT could negatively affect future surgery²

Radiobiological mechanism

Low-dose radiation therapy has anti-inflammatory and immunomodulatory effects. It down-regulates pro-inflammatory cytokines, reduces macrophage activity and may slow the inflammatory cascade that contributes to joint degeneration.^{1,3–5}

Treatment

- Patients receive six treatments over two to three weeks
- Depending on patient's response, a second course of treatment may be required

Patient eligibility⁶

- Early to moderate osteoarthritis (OA)
- Patients >50 years of age
- Upper and lower limbs
- Failure of conservative treatment ≥ 3 months
- Kellgren–Lawrence[†] score 1–3*

Contraindications⁶

- Rheumatoid arthritis
- Pregnancy
- Connective tissue disorders (e.g. lupus, scleroderma)

? †The Kellgren–Lawrence system is a common method of classifying severity of OA using five grades

Classification of OA⁶

- **grade 0:** definite absence of x-ray changes of osteoarthritis
- **grade 1:** doubtful joint space narrowing and possible osteophytic lipping
- **grade 2:** definite osteophytes and possible joint space narrowing
- **grade 3:** moderate multiple osteophytes, definite narrowing of joint space, some sclerosis and possible deformity of bone ends
- **grade 4:** large osteophytes, marked narrowing of joint space, severe sclerosis and definite deformity of bone ends

Osteoarthritis is deemed present at grade 2 although of minimal severity | Grading is done by a radiologist

*Please request your radiologist assign a Kellgren–Lawrence grade when you refer your patient for their x-ray

If your patient is considering LDRT as a pre-surgical option, we suggest their multidisciplinary team is informed.

OA treating Radiation Oncologists



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