

SEOH-CRHMCON- 2026

A Ticking Timebomb

Occupational cancer in India's construction workforce

Asbestos • Crystalline silica • Solar ultraviolet radiation

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Sunday, 9 August 2026 | Multipurpose Hall, India International Centre, New Delhi

The workforce at the centre of this

74 million+

people employed — India's second largest industry

9%+

of national GDP contributed by the sector

~100 million

workers projected as the sector keeps expanding

A high-hazard sector — and the carcinogens travel with the job

Asbestos

Roofing, pipes, insulation — cheap and heat-resistant, still in use

Silica dust

Cutting, grinding, quarrying, sandblasting of stone and concrete

Diesel exhaust

Plant, heavy equipment and site vehicles running continuously

Asphalt fumes & solvents

Road work, waterproofing, coatings and adhesives

Alongside falls from height, being struck by plant, and electrocution — the hazards that get counted. Cancer is the one that does not.

WHAT THE NUMBERS DO NOT TELL US

We are working almost blind

6,500

deaths at factories, ports, mines and construction sites over five years, as reported to Parliament by the Labour Ministry in 2021 — a figure commentators regard as a serious undercount, partly because of how work fatalities are recorded.

2–8%

of all cancers worldwide are estimated to arise from carcinogen exposure in occupational settings — the global anchor against which India has almost no comparable national data.

1 Little Indian research exists

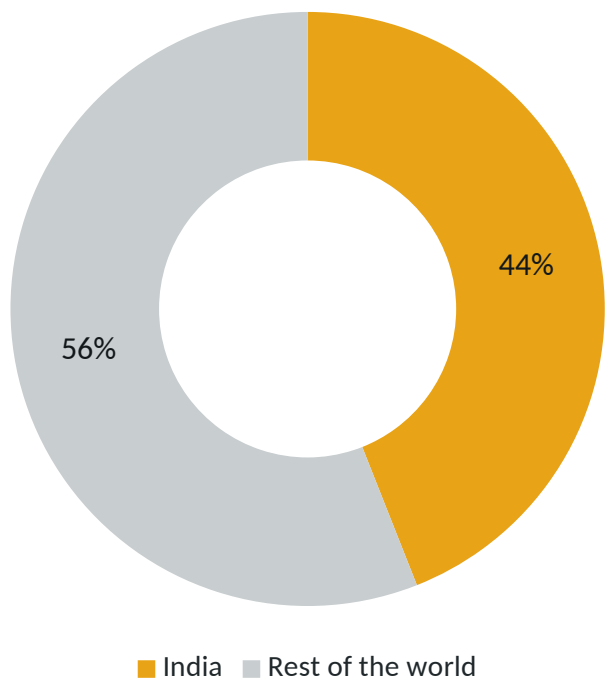
Studies on occupational cancer in Indian construction are sparse — and researchers note that those which exist have tended to examine how workers themselves behave, rather than the dangers built into the work.

2 The exposure is not recorded

Without exposure registers on site, there is nothing to link a cancer diagnosed in 2050 back to a job held in 2020.

Banned in 70 countries — India buys the most

Share of global asbestos imports, 2021



Mining banned in 1993 — use was not

Licences stopped being reissued, but import and use continued. Russia and Brazil are the principal suppliers.

Imports rose 29% in a single year

India's 44% share of world imports in 2021 was a 29% increase on 2020. Exposure is being created now, not inherited.

Construction is the most exposed sector

No other sector carries as much occupational asbestos exposure — and every worker on a site is at risk, not only those handling the material.

What the fibres do once they are airborne

Lung cancer

The largest absolute contributor

Mesothelioma

Pleura, pericardium or
peritoneum

Laryngeal cancer

Recognised by WHO

Ovarian cancer

Recognised by WHO

Asbestosis

Pulmonary fibrosis —
untreatable

The burden already present

Published estimates put more than 6,000 workers in India currently affected by asbestosis, with at least a further 600 carrying asbestosis-related lung cancer. Campaigners describe asbestos as one of the single largest sources of occupational cancer — and note how little attention it has drawn from industry, labour bodies, public health authorities or the medical profession.

70%

of all deaths attributable to work-related cancer come from asbestos alone. On WHO and ILO joint estimates it accounts for over 200,000 deaths worldwide every year.

A strip of cloth tied across the face remains a common sight on Indian sites where a certified respirator is required.

LATENCY

The bill arrives three decades late

30–40 years

between exposure and the first symptom

Clinicians in Delhi have warned that asbestos-related disease commonly takes three to four decades to manifest — which is precisely why early detection fails. The worker has changed employer, trade and often state before anything shows.

6 million+

Indians may develop an asbestos-related disease over the coming decades

600,000+

of those are projected to be cancers, on the TISS study's estimate

1–3 years

typical life expectancy once mesothelioma is diagnosed

Asbestos-related cancers are incurable, so palliative care is the mainstay — and India's palliative care system is still at an early stage of development. The authors of the projection put it plainly: we need to examine our ability to meet this coming problem.

Silica: Rajasthan's stone belt

48,448

registered silicosis cases in Rajasthan —
the highest of any state in India

Labourers in the unorganised stone quarrying, crushing, cutting and polishing industries carry the highest silica exposure in the country — and the least protection. The disease is irreversible, the employment is informal, and the workforce is increasingly migrant.

1

The work

Quarrying, crushing, cutting and polishing stone — performed in extreme heat, high noise, poor housing and on low wages.

2

The disease

Silicosis is irreversible: major loss of lung function and a raised risk of early death from complications such as heart failure. Silica exposure also increases susceptibility to tuberculosis, already common in India.

3

The workforce shift

As awareness grew, many local labourers left the industry — replaced by migrants from Bihar, Uttar Pradesh, Madhya Pradesh and West Bengal, drawn by economic necessity and often setting the health risk aside.

4

No safety net

Because the employment is informal, these workers cannot access social security benefits.

The exposure nobody is issued protection against

1.6 billion

working-age people exposed to solar UV outdoors at work in 2019

28%

of the entire working-age population of the world

~19,000

deaths from non-melanoma skin cancer that year across 183 countries

1 in 3

of all non-melanoma skin cancer deaths are caused by working in the sun

Men account for around 65% of those deaths.

Why India is not exempt

Skin cancer has historically been less common here than in Western countries, and higher melanin levels are protective. But recent data show incidence rising across the country. Outdoor occupations — agriculture and construction above all — mean prolonged sun exposure, and climate change and air pollution are compounding it.

What WHO asks employers and governments to do

- Provide shade at the workplace
- Shift working hours away from midday peak UV
- Train and educate outdoor workers
- Supply sunscreen and protective clothing
- Begin protection from a young age — the damage accumulates over decades

Diagnosed, and still uncompensated

1

Causation cannot be proved

Establishing a direct link between the job and the cancer, decades later and without exposure records, defeats most claims at the first step.

2

The regulation is not there to cite

Safety rules are insufficient to form the basis of a claim in the first place.

3

Nobody knows the disease is occupational

Awareness of occupational cancer is low among the workforce and the wider population — and among clinicians.

4

The legal system is out of reach

Navigating it to secure damages is difficult, and hardest for migrant workers with limited access to healthcare and legal assistance.

Each of these is a documentation problem before it is a legal one — and documentation is something the treating clinician controls.

Source: Orchie Bandyopadhyay, 'Occupational cancer: a ticking timebomb in construction', British Safety Council India, 7 February 2025.

Mesothelioma: the first real change in twenty years

Nivolumab + ipilimumab

Approved first-line for unresectable pleural mesothelioma in October 2020 on CheckMate 743 — the first change to first-line therapy in about 15 years, since pemetrexed and cisplatin in 2004. Median overall survival 18.1 months against 14.1 with chemotherapy.

14% vs 6%

Five-year overall survival on immunotherapy versus chemotherapy, in the 2026 five-year CheckMate 743 update. In non-epithelioid disease the gap is wider still — 12% against 1%.

Pembrolizumab + platinum-pemetrexed

Approved September 2024 on KEYNOTE-483 as a further first-line option: median survival 17.3 months versus 16.1 with chemotherapy alone.

Peritoneal disease: surgery + HIPEC

Cytoreductive surgery with heated intraperitoneal chemotherapy at high-volume centres reports five-year survival in the region of 47–65% in selected patients.

In trials

CAR T-cell therapy, therapeutic vaccines and arginine-depletion with ADI-PEG20, which improved progression-free survival in non-epithelioid disease.

Guidelines now prefer dual immunotherapy first-line in non-epithelioid histology. Real progress — but five-year survival still sits at 14%.

Lung cancer: the field has been rebuilt

Early detection

- Low-dose CT screening has moved detection to more curable stages in high-risk groups
- The case for extending it to asbestos- and silica-exposed cohorts is strengthening

Resectable disease

- Perioperative chemo-immunotherapy is now standard in non-oncogene-driven disease
- Adjuvant osimertinib in EGFR-mutant and alectinib in ALK-rearranged disease
- Osimertinib consolidation after chemoradiotherapy in unresectable stage III

Advanced disease

- Molecular profiling is mandatory — EGFR, ALK, ROS1, KRAS, HER2 and beyond
- Antibody–drug conjugates maturing: datopotamab deruxtecan, telisotuzumab vedotin
- Circulating tumour DNA emerging for minimal residual disease detection

The occupational patient benefits from all of this identically — provided the cancer is found early enough for it to matter. That is a screening and surveillance problem, not a drug problem.

Skin cancer: curable early, treatable late

Surgery remains curative in the large majority. Occupational skin cancer is overwhelmingly keratinocyte carcinoma — cutaneous squamous cell and basal cell — on chronically sun-exposed head, neck and forearms.

Advanced disease

Cemiplimab, a PD-1 inhibitor, was the first checkpoint agent approved for advanced cutaneous squamous cell carcinoma and is now standard of care. Pembrolizumab has shown durable single-agent activity in metastatic disease.

Adjuvant, since October 2025

The FDA approved adjuvant cemiplimab for high-risk cutaneous squamous cell carcinoma after surgery and radiotherapy, on the phase III C-POST trial in 415 patients.

Neoadjuvant

Pooled data on neoadjuvant cemiplimab report pathological response in around 72% of patients, offering a route to smaller surgery and less disfigurement on the face and scalp.

But this is the exposure where prevention is cheapest of all. Shade, shifted hours, a hat and covered arms cost almost nothing — and no immunotherapy is needed for a cancer that never starts.

PREVENTION

What would actually reduce the burden

Government

- Regulate and enforce control of carcinogen exposure on site
- Mandate shade, adjusted hours and protective clothing for outdoor work
- Recognise occupational cancers and simplify the compensation route
- Fund surveillance and palliative capacity ahead of the projected wave

Employers

- Control exposure at source — substitute, enclose, suppress dust
- Issue and enforce PPE that meets international standards, not cloth
- Deploy health inspectors and routine worker health checks
- Keep exposure records that outlive the contract

Clinicians

- Take and document an occupational history on every cancer patient
- Treat mesothelioma and silicosis as sentinel events warranting site enquiry
- Support claims with written attribution
- Build palliative capacity for incurable asbestos disease

Exposure is preventable at almost no cost compared with the disease it produces.

THE TRAJECTORY

It gets worse before it gets better

1 The sector keeps growing

Toward roughly 100 million construction workers in the coming decades.

2 Migration keeps rising

Temporary movement from poorer to wealthier states will continue to increase alongside it.

3 So does the exposed population

Occupational cancer among construction workers is expected to rise correspondingly.

4 And the health system must meet it

The occupational health needs of this workforce warrant immediate attention from policymakers.

Every case we will diagnose in 2055 is being caused on a construction site this week.

SUMMARY

Six things to take back

1

India's construction workforce — 74 million people and growing — is being exposed to asbestos, silica and solar UV with little control and almost no surveillance.

2

India takes the largest share of world asbestos imports despite banning mining in 1993; asbestos alone accounts for over 70% of work-related cancer deaths.

3

Latency of 30–40 years means today's exposure surfaces as cancer in the 2050s — and projections run to 6 million asbestos-related diseases, over 600,000 of them cancers.

4

Silicosis is concentrated in Rajasthan's stone belt and increasingly borne by migrant workers outside any social security net.

5

Treatment has genuinely advanced — dual immunotherapy in mesothelioma, perioperative regimens in lung cancer, adjuvant cemiplimab in skin cancer.

6

The occupational history you write in the notes is what makes the diagnosis, the site investigation and the compensation claim possible.

Thank you