



Asbestos: The 20th century gift that keeps on killing

James Stanley
Dobbs Group

17th October 2025



The 20 most common cancers (2015)



Cancer	Annual Deaths	Papers
Lung	33,465	2817
Colorectal	16,092	2772
Breast	12,509	4845
Prostate	10,000	1574
Oesophagus	7,419	3120
Pancreas	7,238	451
Stomach	5,672	1140
Bladder	4,734	758
Non-Hodgkin Lymphoma	4,451	1791
Ovary	4,447	1228
Leukaemia	4,317	2421
Kidney	3,580	855
Brain / central nervous system	3,425	824
Liver	2,844	1517
Multiple myeloma	2,477	470
Mesothelioma	2,431	44
Malignant Melanoma	1,817	628
Oral	1,722	2828
Uterus	1,637	1169
Cervix	1,061	916

The 20 most common cancers (2015)



Cancer	Annual Deaths	Papers
Lung	33,465	2817
Colorectal	16,092	2772
Breast	12,509	4845
Prostate	10,000	1574
Oesophagus	7,419	3120
Pancreas	7,238	451
Stomach	5,672	1140
Bladder	4,734	758
Non-Hodgkin Lymphoma	4,451	1791
Ovary	4,447	1228
Leukaemia	4,317	2421
Kidney	3,580	855
Brain / central nervous system	3,425	824
Liver	2,844	1517
Multiple myeloma	2,477	470
Mesothelioma	2,431	44
Malignant Melanoma	1,817	628
Oral	1,722	2828
Uterus	1,637	1169
Cervix	1,061	916







Search

[Health A to Z](#)[NHS services](#)[Live Well](#)[Mental health](#)

[Home](#) > [Health A to Z](#) > [Conditions A to Z](#)

Mesothelioma

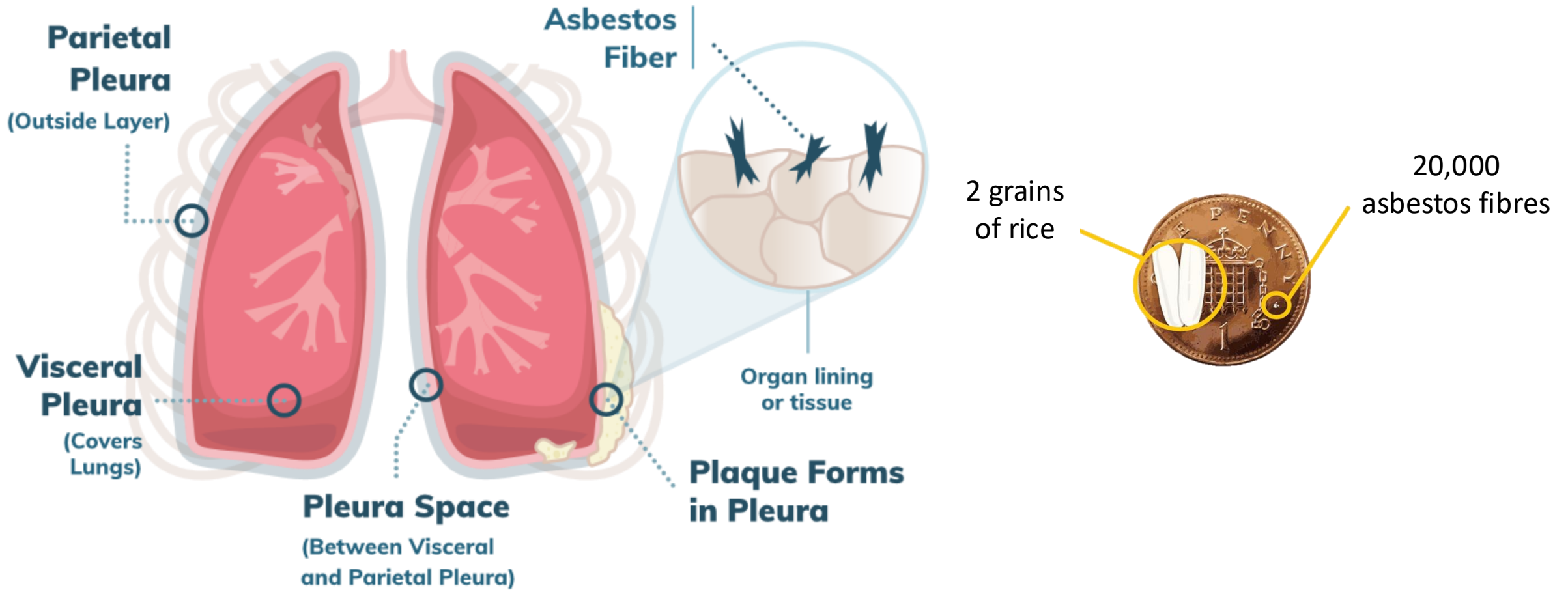
Mesothelioma is a type of cancer that develops in the lining that covers the outer surface of some of the body's organs. It's usually linked to asbestos exposure.

Mesothelioma mainly affects the lining of the lungs (pleural mesothelioma), although it can also affect the lining of the tummy (peritoneal mesothelioma), heart or testicles.

More than 2,700 people are diagnosed with mesothelioma each year in the UK. Most cases are diagnosed in people aged 75 and over, and men are affected more commonly than women.

Unfortunately, it's not possible to cure mesothelioma, although treatment can help control the symptoms.

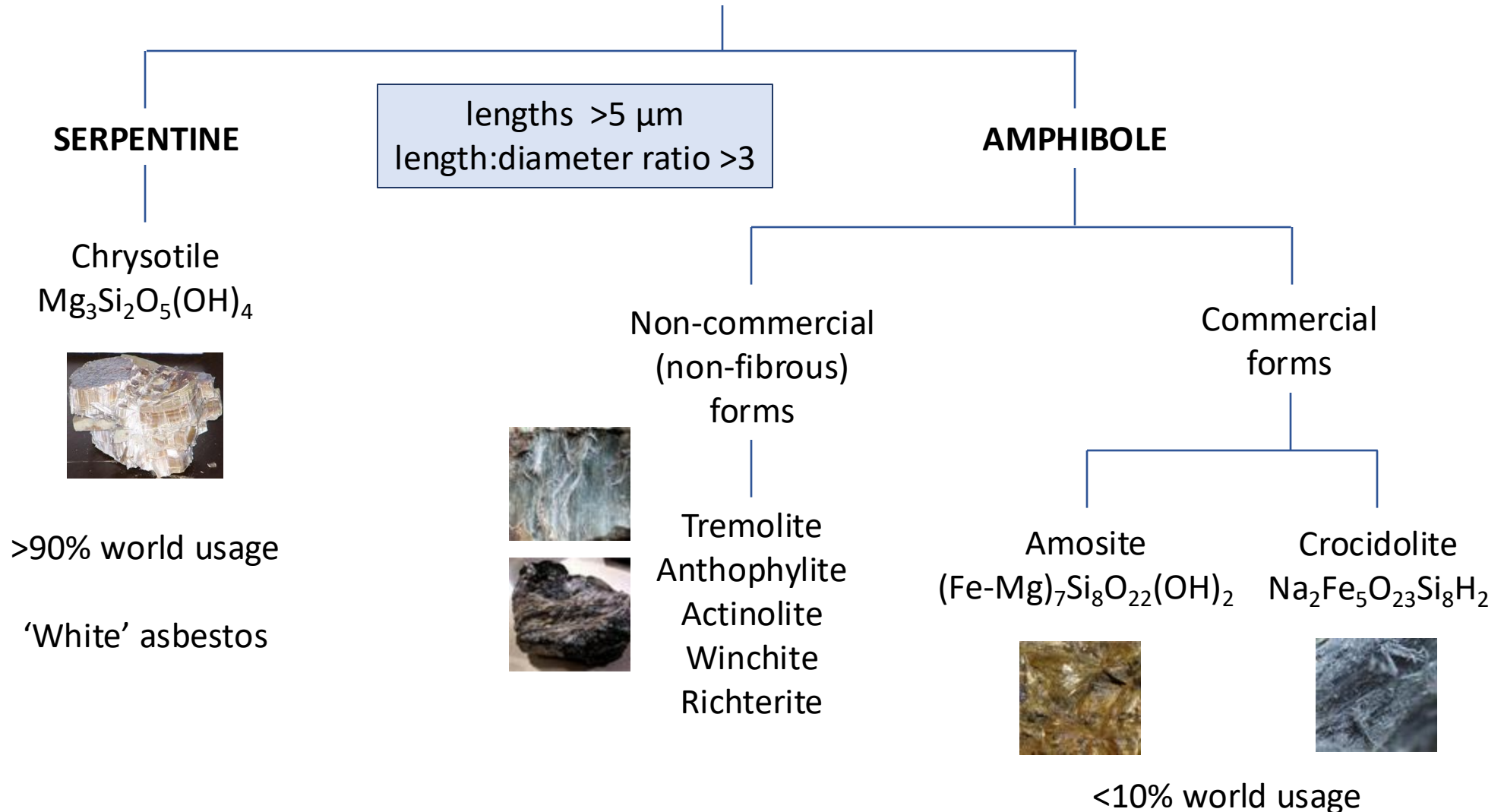
How do People Get Malignant Pleural Mesothelioma?



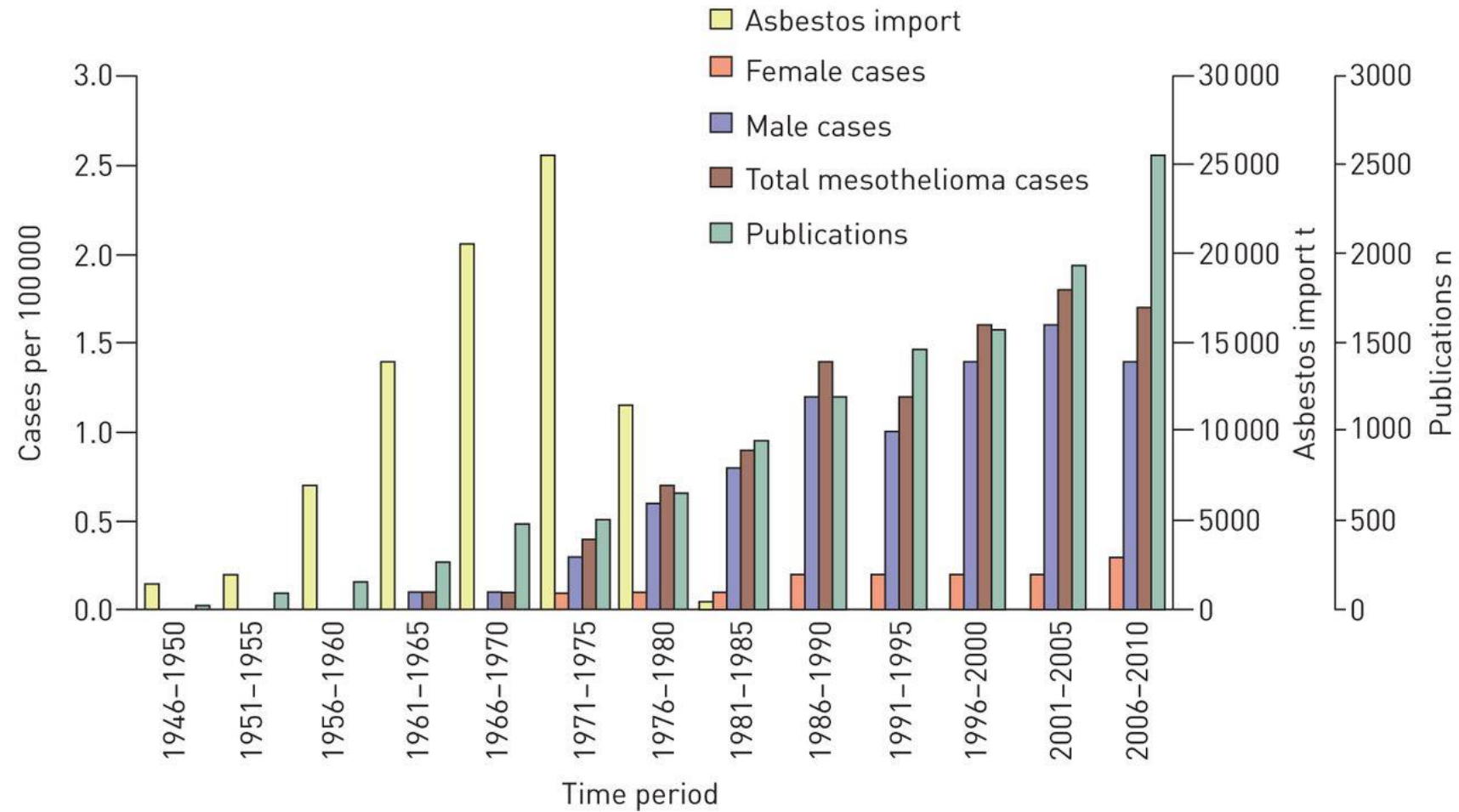
What are the Different Types of Asbestos?



Group of fibrous silicate minerals with crystalline structure



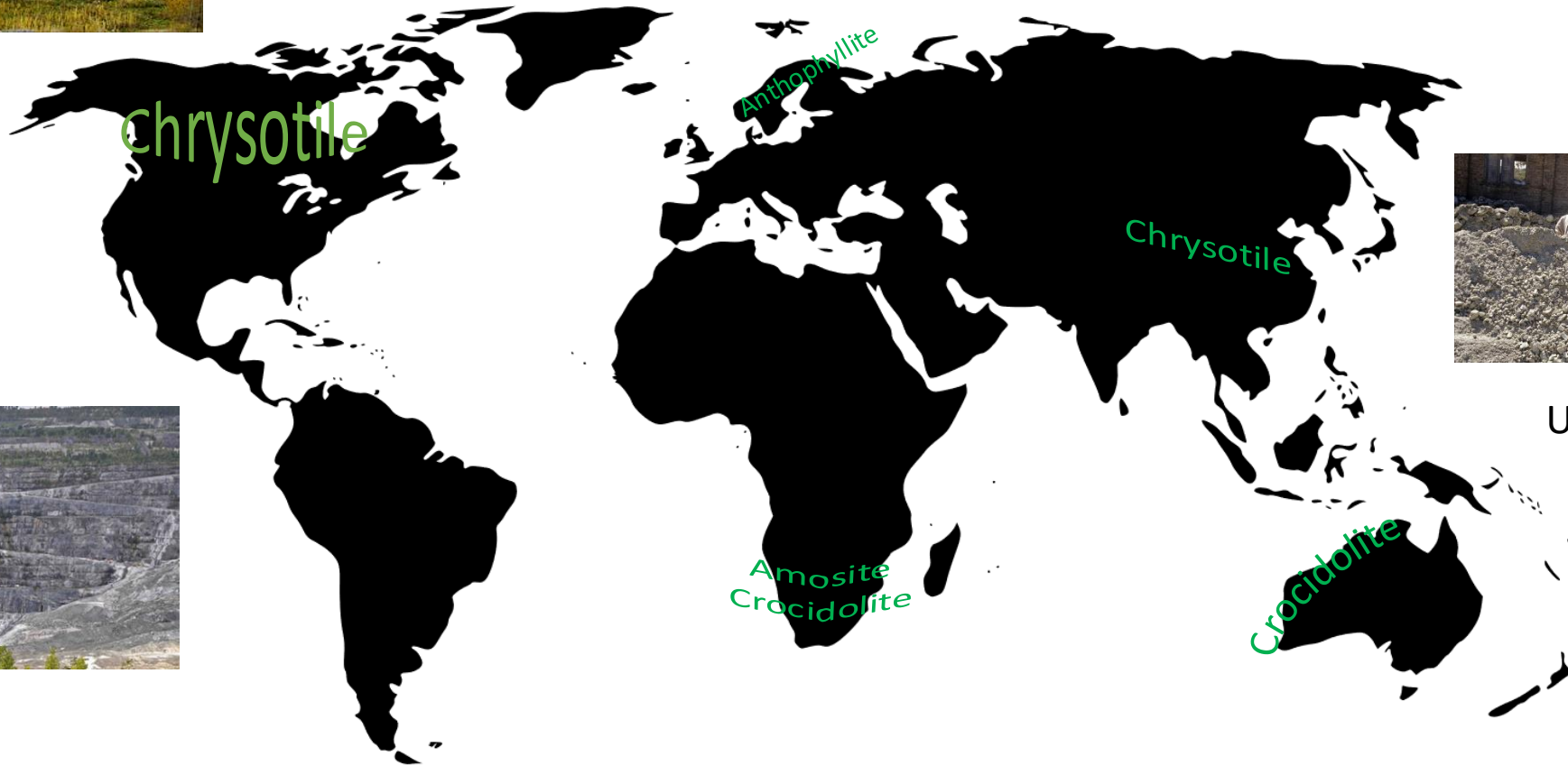
The Prevalence of Asbestos in Norway



Where is Asbestos Mined?



Jeffrey Mine, Canada



Unprotected mining
India



The Dangers of Asbestos - Wittenoom

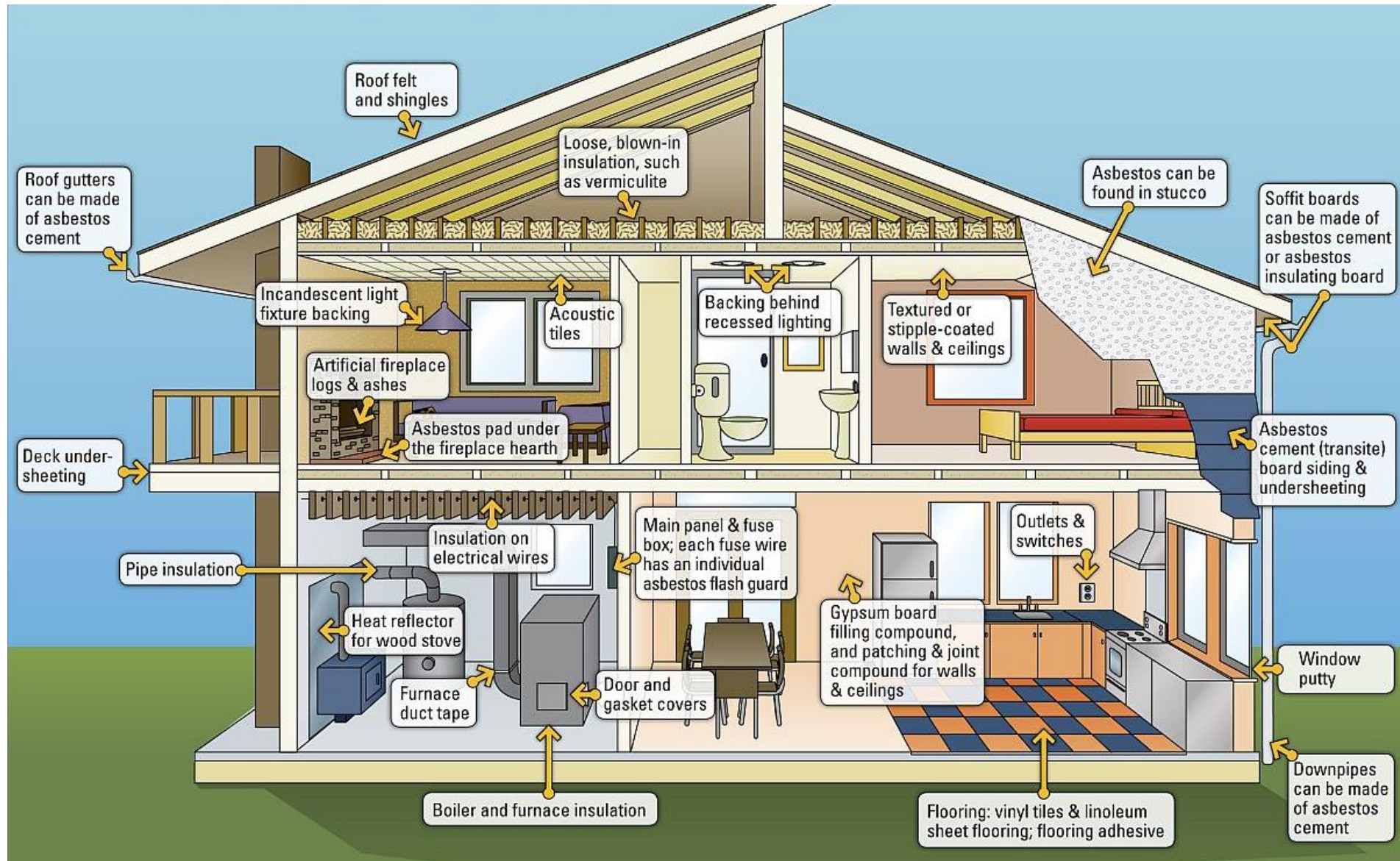


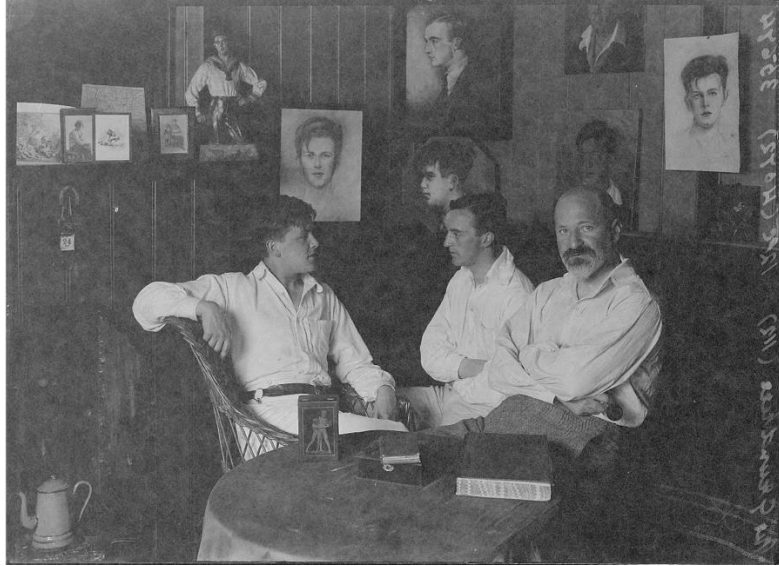


- During this time 20,000 people lived and worked in the town.
- 2000 or 10 % of the population has been diagnosed with mesothelioma.
- The average rate of occurrence in Western Australia is 3.4 per 100,000.
- The town was so toxic that the Australian government demolished it in 2023 and removed it from all maps in 2024.



Where is Asbestos Found?





Internment Chalet, Douglas, 1916

Brick Works, Peel, 1952



Summer Land, Douglas, 2004



I remember as a joiner, as an apprentice, being sent up on sky hooks, up ridges on dormer bungalows, to have to nail ridge on. I can remember being complete what with asbestos dust, and being told, 'You are only a ponce, you don't want to worry about things like that. I've done it for 40 years' – and the **individual was dead by 57!**

- Peter Karren, 2006 ¹

I remember as a young apprentice cutting up asbestos with a circular saw, and I could have auditioned as the snowman.

- Peter Karren, 2001 ²





[europa.eu/rapid/press-release_IP-99-572_en.htm](#)

About this site | Legal notice | Contact | Search English (EN)



EUROPEAN COMMISSION

Press Release Database

European Commission > Press releases database > Press Release details

[A](#) [A](#) [t](#) [t](#) [s](#) [RSS](#)

[Latest updates](#) [Related links](#) [Contact](#) [Search](#) [Login](#) [Subscribe](#)



Other available languages: [FR](#) [DE](#)

[Back to the search results](#) [Expand](#) [Share](#)

[DOC](#) [PDF](#)

ip/99/572

Brussels, 27. July 1999

The European Commission bans White Asbestos

The European Commission has decided to ban nearly all of the remaining uses of asbestos. Of the six different types of asbestos, five were banned in the European Union (EU) in 1991, and the remaining type (chrysotile, or white asbestos) was banned in 14 categories of product. With today's decision Annex I of to Directive 76/769/EEC on dangerous substances and preparations will be updated. This will extend the ban to chrysotile in asbestos cement products (mainly pipes and roofing), friction products (e.g. brake and clutch linings for heavy vehicles) and seals and gaskets as well as various specialist uses. The directive requires the ban to be brought fully into force across the EU by 1 January 2005 at the latest. Many Member States are likely to bring it in earlier or have already done so. The Directive does not require existing asbestos in buildings to be removed. The risk to health from asbestos in buildings is usually very low if it remains undisturbed.



Asbestos

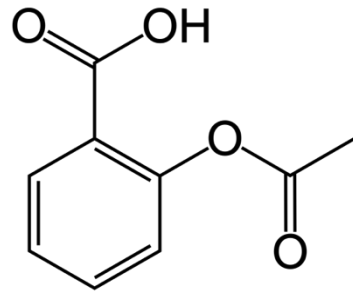
On the 21 June 2022 the Control of Asbestos (Application) Order 2022 and the Health and Safety at Work (Managing and Working with Asbestos Code of Practice)(Application)Order 2022 were approved by Tynwald, these orders apply the Control of Asbestos Regulations 2012 an act of Parliament and its accompanying approved code of practice (ACOP) to the Isle of Man.

These regulations come into force on the 1 August 2022 and require duty holders to identify and manage asbestos in non-domestic premises and for the first time introduces a prohibition on the supply of asbestos and materials with asbestos added. They also introduce a requirement to obtain a licence from the Department of Environment, Food and Agriculture (DEFA) before working on licensable asbestos containing products.

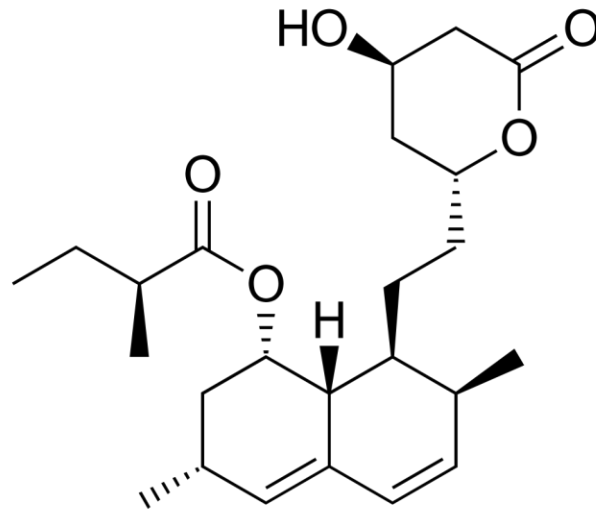
The Managing and Working with Asbestos Code of Practice provides a recommended method of meeting the requirements of the applied Regulations.

Year	Amount of asbestos disposed of into landfill (tons) ¹
2022	233
2023	318
2024	279

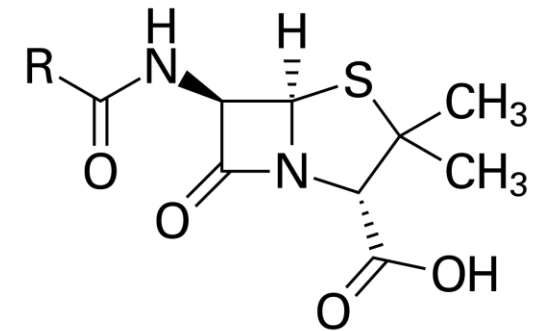
1) Environmental Protection Unit, 2024 Isle of Man Waste Returns Report, **2025**, https://www.gov.im/media/1389207/v2_2024-isle-of-man-waste-returns-report-uploaded-300625_compressed.pdf (accessed September 2025)



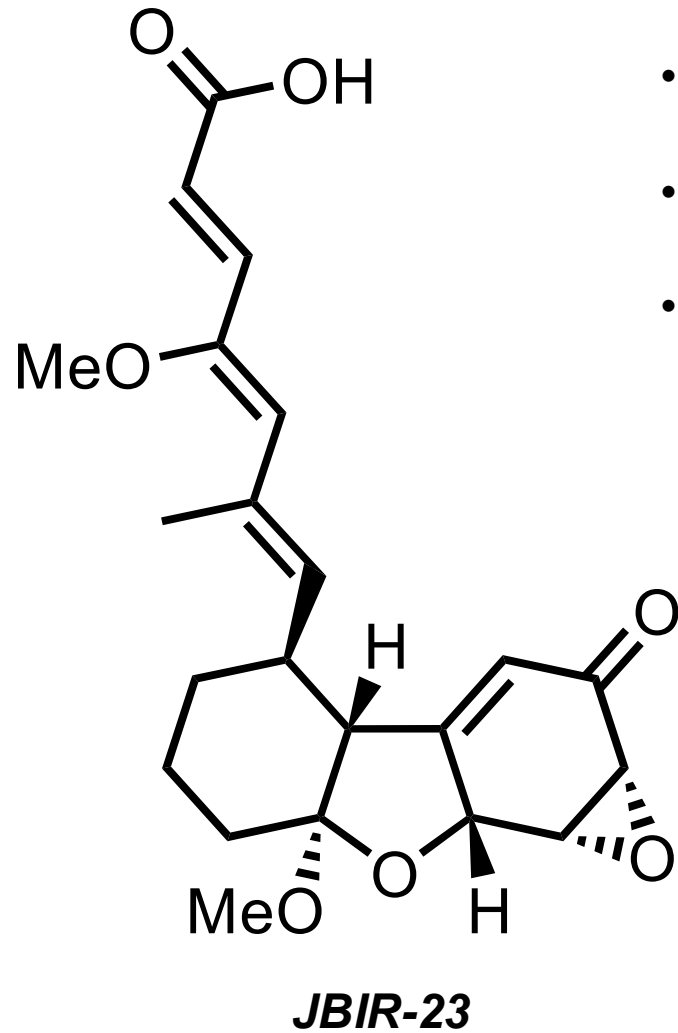
Aspirin



Statin



Penicillin



- The First compound to show biological activity against MPM ($IC_{50}=8\text{ }\mu\text{M}$).
- First discovered by Shin-Ya in 2008 from *Streptomyces* sp
- Provides biological activity by inhibiting the break down of tubulin.



What Makes Drug Discovery Complicated?



3-5 Years

1-2 Years

6-7 Years

5-10 000 compounds

200

5

1

Discovery

Pre-Clinical

Phase 1

Phase 2

Phase 3

Target Identification
Assay Development
Lead identification

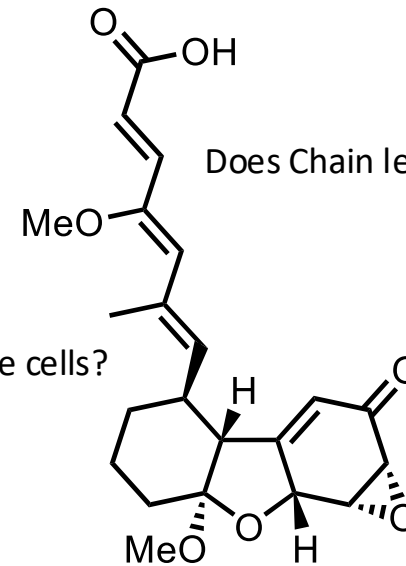
Structure-Activity Studies & Optimisation

Manufacture
Formulation
Patent(s)

CHEMISTRY

BIOLOGY

Will the drug be able to enter the cells?



Does Chain length affect potency?

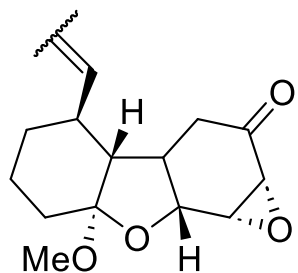
Are all the sections necessary?

JBIR-23

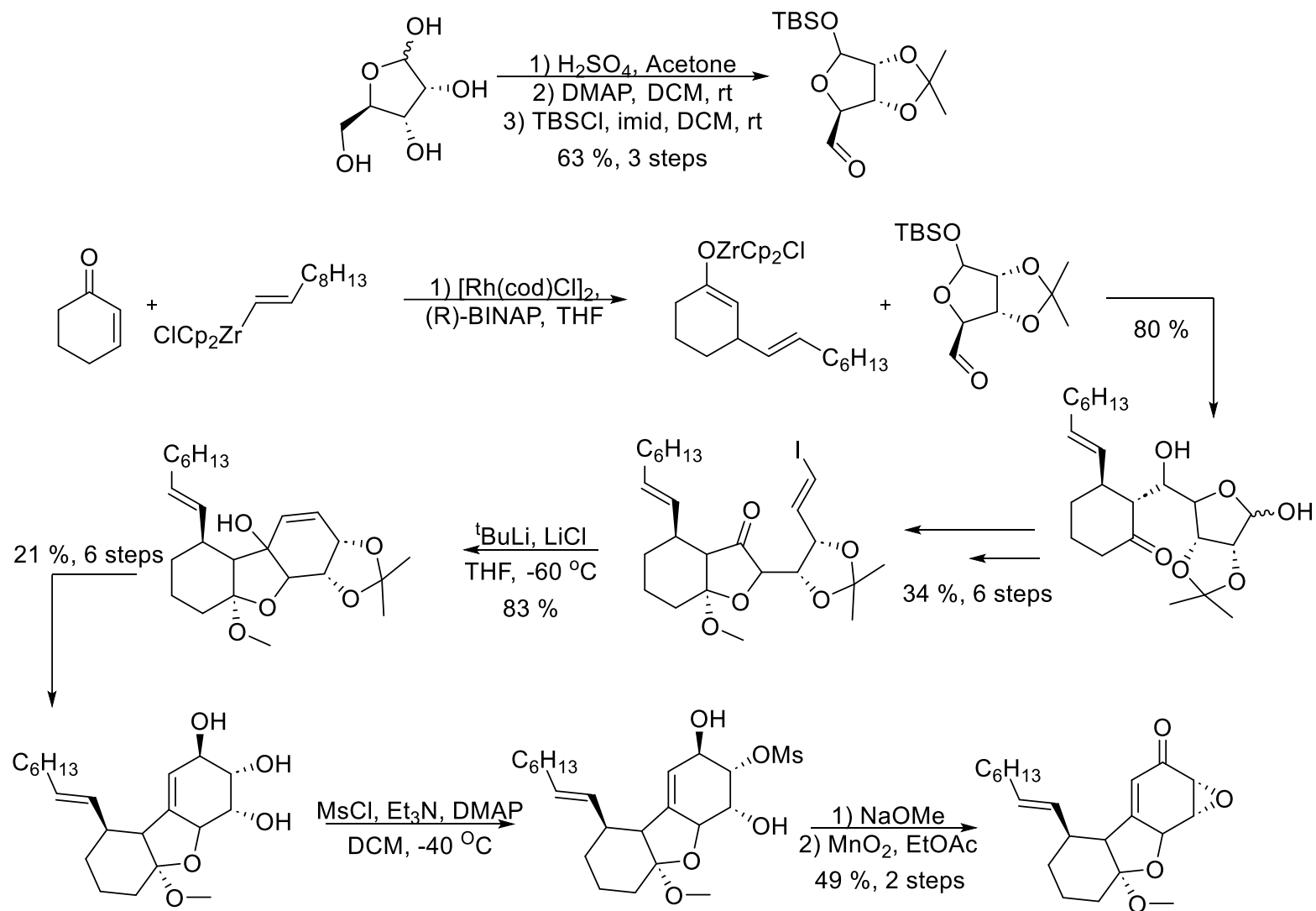


Is this achievable for mesothelioma?

What Makes Drug Development so Complicated?

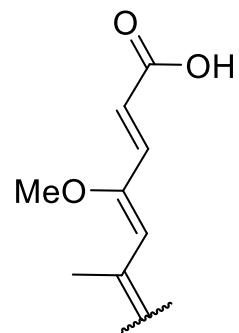


JBIR-23 Core

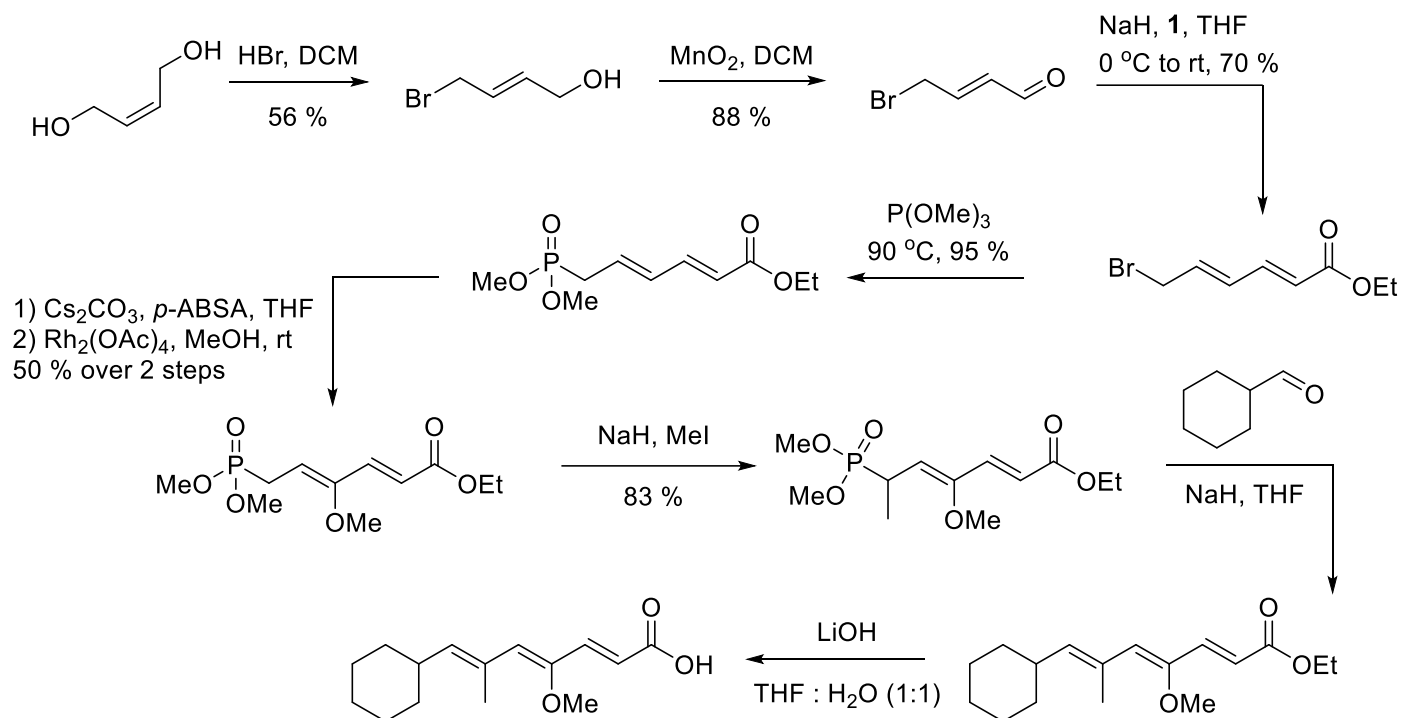




What Makes Drug Development so Complicated?



JBIR-23 Side Chain



How can you help?



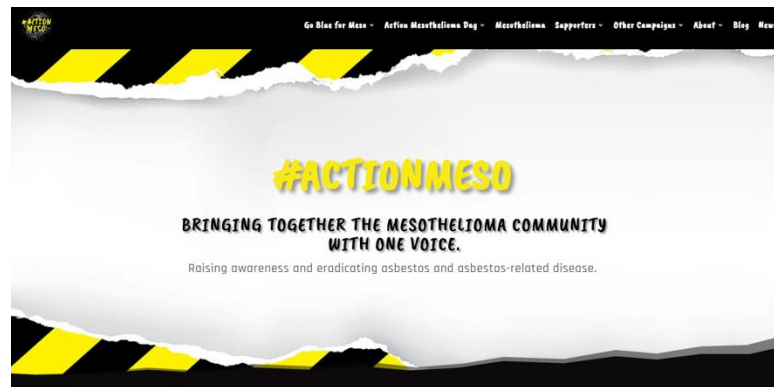
Mesothelioma UK:

www.mesothelioma.uk.com



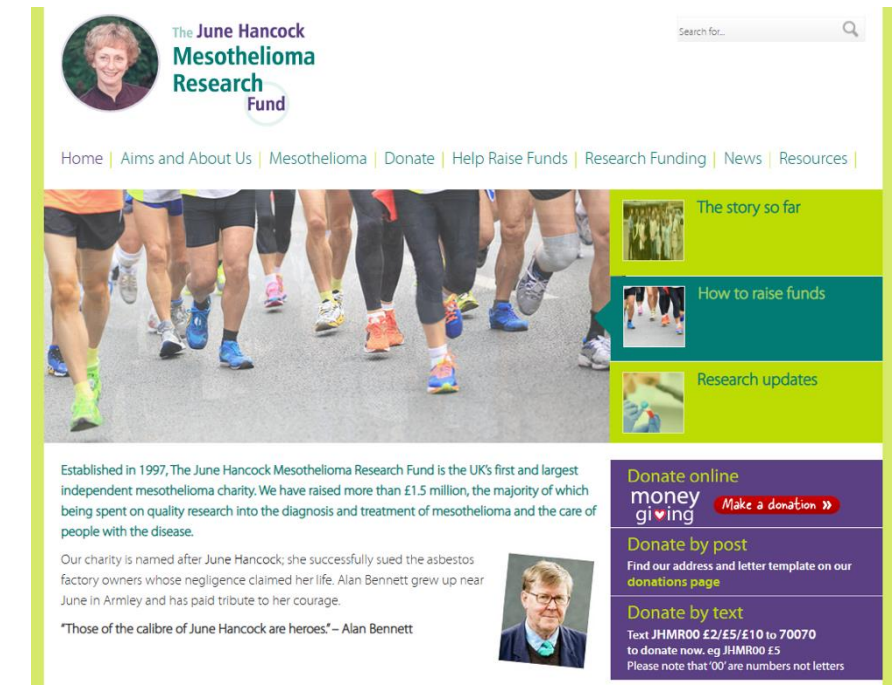
Action Meso:

www.actionmeso.org



June Hancock Mesothelioma Research Fund

www.junehancockfund.org



Regional Support Groups throughout UK

www.hasag.co.uk



James Stanley

Contact: j.p.stanley@surrey.ac.uk

LinkedIn





THANK YOU FOR LISTENING ANY QUESTIONS?

Special Thanks to:

Prof Adrian Dobbs

Imane Dalil

Dr Anas Alkayal

Michael Mattimore

James Scanlon

Alex Ludlow



Engineering and
Physical Sciences
Research Council