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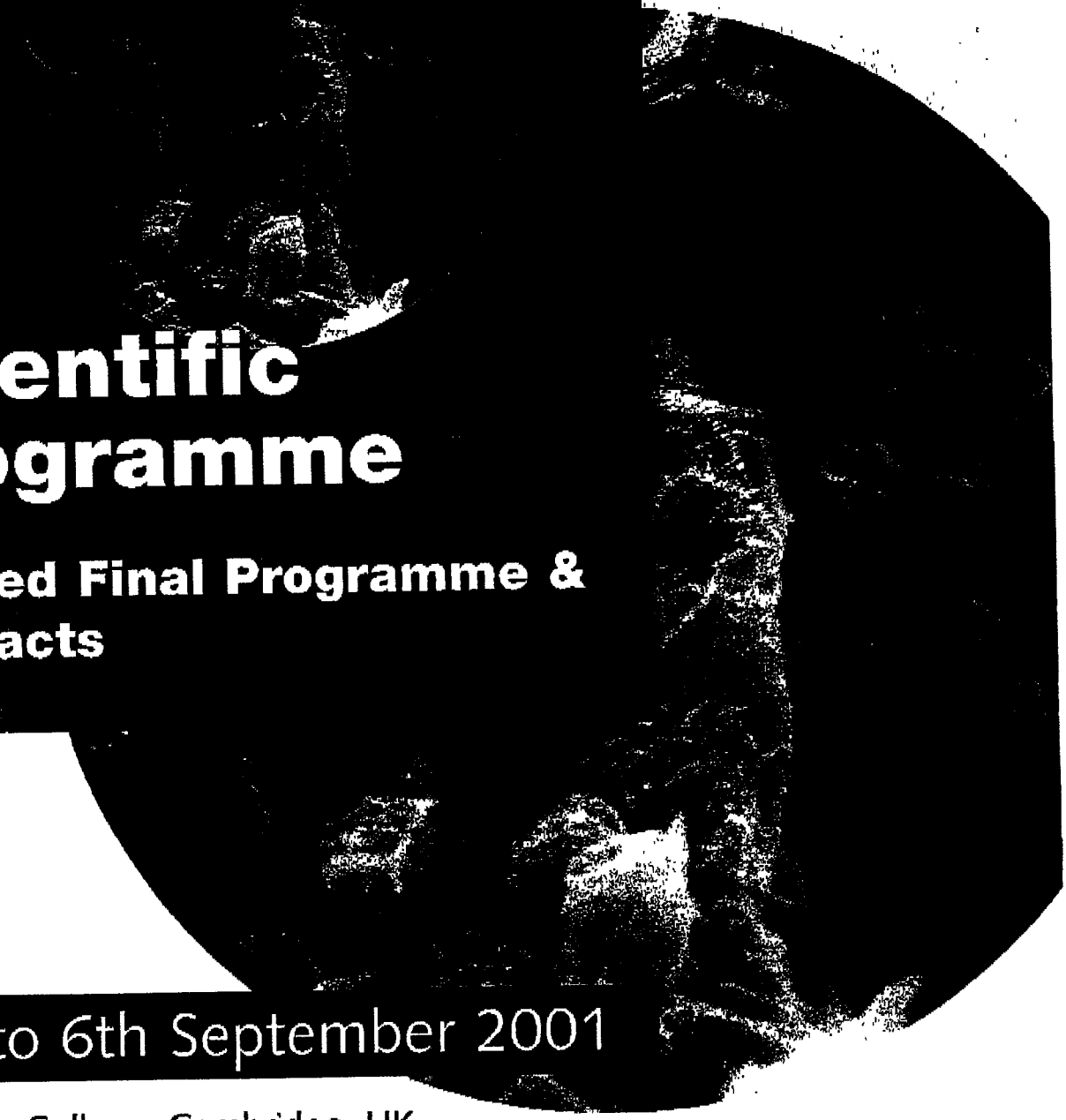
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MALIGNANT MESOTHELIOMA IN AUSTRALIA (1945-2000)

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Between 1945 and 1980, 658 (535 male, 123 female) cases of malignant mesothelioma were identified in Australia. Since 1981 Australia has maintained a complete national register for cases of malignant mesothelioma. Incidence has increased rapidly and is still increasing in both males and females. In 2000 the annual incidence rate was 6.6 per 100,000 (male >20/year) (1982-85: 2.7) and 1.6 per 100,000 (female >20/year) (1982-85: 0.325). Incidence rates are similar to liver cancer in Australia. These are the highest reported national incidence rates in the world. As at 28 February 2001, there were 6,400 cases in Australia. Pleural:peritoneal ratio was 18:1 (male), 6:1 (female). Positive asbestos exposure history was obtained in 87% of cases. Mean latency from first exposure was 37 years. The pattern of exposure is shifting away from the older traditional industries towards product, domestic and environmental exposure. Exposure occurred in a wide range of occupations and industries and non-occupational settings. Some common exposure histories were: repair and maintenance of asbestos materials (13%), shipbuilding (3%), asbestos cement production (4%), railways (3%), powerstations (3%), boilermaking (3%), Wittenoom (5%), wharf labourer (2%), para occupational, hobby, environmental (4%), carpenter (4%), builder (6%), navy/merchant navy (3%), plumber (2%), brake linings (2%), multiple (12%). Approximate lifetime risks (%) for identifiable occupational groups exposed 30 to 50 years ago were calculated as:

$$\text{Lifetime risk (\%)} = \frac{70 \times \text{number of mesothelioma cases notified 1986- 2000} \times 100}{\text{Population in occupation category in Australia} \times 15}$$

Results were: Wittenoom mine or mill worker (16.6), power station worker (15.0), railway labourer (11.4), navy/merchant navy (5.1), Wittenoom town (3.1), waterside worker (2.1), carpenter/joiner (2.0), painter/decorator (1.6), plumber (1.3), boilermaker/welder (1.3), plasterer (1.1), bricklayer (0.8), electrical fitter, mechanic, electrician (0.5), vehicle mechanic (0.5) [cf all Australian men (0.39), all Australian women (0.07)]. The incidence is still increasing and, as peak national asbestos exposure was in 1973 (4.5 kg/capita/yr), peak incidence is not expected until about 2010. The expected total number of mesothelioma cases in Australia from 1945 to 2020 is estimated to be about 18,000, based on models for Wittenoom, extrapolated for Australia as whole (assuming Wittenoom contributes 5% of cases), and direct extrapolation from the best fit to the empirical incidence curve, constrained to have a maximum value at 2010, following a 37 year latency from the time of maximum exposure. The estimated number of cases still to occur in Australia (present population = 19 million) is thus about 11,000 by 2020. With asbestos related lung cancer estimated to occur at a ratio of 2:1 to mesothelioma the expected future case load of asbestos related cancer can be expected to be of the order of 30,000-40,000 by 2020. The various Australia state and federal government preventive, clinical and compensatory authorities are now developing a national strategy for dealing with this problem.