

## Relationship Between Shift Work and the Risk of Prostate Cancer

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### Abstrak

Kanker prostat diketahui berhubungan dengan pekerjaan yang melibatkan kerja shift. Pada tahun 2007, International Agency for Research on Cancer (IARC) menyatakan bahwa kerja shift dengan disrupti sirkadian menyebabkan kemungkinan kanker pada manusia. Paparan terhadap LAN (Light at Night) menekan sekresi melatonin pineal dan menstimulasi peningkatan hormon sex yang pada gilirannya dapat meningkatkan kerentanan terhadap kanker yang bergantung pada hormon. Kasus disini akan menilai bagaimana hubungan antara pekerja shift suatu manufaktur yang telah bekerja 30 tahun dengan peningkatan risiko kanker prostat melalui beberapa telaah jurnal kritis untuk menilai validitas dan aplikabilitasnya. Dari ketiga jurnal yang ditelaah adalah valid dan aplikatif. Sebuah systematic review dan meta-analysis oleh Mancio J.dkk tahun 2018 adanya peningkatan yang signifikan antara kanker prostat dengan rotasi kerja gilir. Begitu pula dengan Behrens T.dkk tahun 2017. Namun, studi kohort Torbjrn A.dkk tahun 2017 menilai tidak ada hubungan kanker prostat dengan durasi kerja malam. Perbedaan ini mungkin karena kurangnya pengukuran paparan, dan perbedaan dalam jenis kovariat yang disesuaikan untuk kelompok pekerjaan heterogen yang terlibat.

.....Prostate cancer has been associated with jobs that involve some degree of work at night. In 2007, the International Agency for Research on Cancer (IARC) concluded that shift work involving circadian disruption was probably carcinogenic in humans. Exposure to artificial LAN (Light at Night) suppresses pineal melatonin secretion and subsequently leads to an increase of sex hormones, which in turn could increase the susceptibility to hormone-dependent cancers. In this case, the authors assessed the relationship between workers in a manufacture company who had worked shift work for 30 years and an increased risk of prostate cancer. This case takes evidence base from several journals that support this hypothesis while doing a critical appraisal to determine its validity and applicability. The three journals appraised were valid and applicable. From A systematic review and meta-analysis by Mancio J. et al. in 2018, there was a significantly increased risk of prostate cancer with rotating shift work. Behrens T. et al. (2017) observed a twofold increased HR among shift workers and night workers working in industries. However, cohort studies by Torbjrn A. et al (2017) with no association with duration of night work was seen, this discrepancy may be due to a lack of a common exposure measurement, differences in the type of covariates adjusted for or heterogeneous occupational group involved, and selection into and out of night work occurs continuously.