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Smoking and Other Determinants of COVID Severity Among Cancer Patients

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Cancer patients are vulnerable to severe COVID-19. Cancer type, associated comorbidities, and lifestyle characteristics can affect the risk of hospitalization, length of hospital stay, and severe COVID defined by the use of assisted ventilation and hypoxia.

### Results

- Increased risk of a prolonged hospital stay were associated with:
  - Malignant neoplasms of lip, oral cavity and pharynx 1.692 (1.514-1.890) P= 0.001
  - Malignant neoplasms of lymphoid and hematopoietic tissue 1.226 (1.147- 1.310) P= 0.001
  - Anemia 1.360 (1.284-1.442) P=0.001,
  - Heart failure 1.248 (1.159-1.344) P= 0.001
  - BMI above 30, 1.096 (1.031-1.165) P=0.003
  - Male sex 1.253 (1.177-1.335) P=0.001
  - White race 1.087 (1.024~1.153) P=0.006

- Increased risk of severe COVID-19 (Hypoxemia and use of assisted ventilation) is associated with:
  - Smoking 1.450 (1.006-2.090) P=0. 005,
  - White race 1.883 (1.231-2.924) P=0.004,
  - BMI above 30, 2.135 (1.253-3.638) P= .005
  - Heart failure 1.675 (1.004-2.795) P=0.048
  - Malignant neoplasms of lip, oral cavity and pharynx 3.416 (1.278-9.130) P=0.014
  - Neoplasms of the urinary tract 1.694 (1.026-2.797) P=0.

### Conclusion

- Cancer patients are vulnerable to severe COVID-19. cancer type, associated comorbidities, and lifestyle characteristics can affect the risk of hospitalization, length of hospital stay, and severe COVID defined by the use of assisted ventilation and hypoxia.

- Precautionary measures should be taken based on their specific clinical characterization.

- Tailored needs should be validated in future research.