Effect of digital tumor board solutions on “failure-to-discuss” rates for patient cases during tumor boards.

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Background:
A multidisciplinary tumor board (MTB) provides an interdisciplinary approach for decision-making in cancer care. Efficient conduction of MTBs is important for optimal patient management. It is, however, often observed that prepared patient cases are not discussed during tumor boards due to limited time or incomplete information, which could cause delay to care decisions and/or the initiation of treatments. It remains unknown whether digital technologies can reduce the rate of failure to discuss during MTBs.

Methods:
A prospective cohort study was undertaken to evaluate the preparation & conduction of MTBs pre- & post-implementation of the NAVIFY Tumor Board (NTB) solution at Missouri University Health Care (MU), including the Ear, Nose & Throat (ENT) MTB. The NTB is a cloud-based workflow product, integrated with the hospital EMR, that aggregates and displays relevant clinical information. NTB was introduced to the MUENT MTB on Oct 10, 2018.

Results:
Pre-NTB implementation, data was collected from 42 ENT MTBs. A total of 551 patient cases were prepared for MTBs, but only 423 patient cases were discussed. This was an average “failure-to-discuss” rate of 19.4% per meeting (SD = 15.6%). After NTB implementation, data was collected from 7 MTBs where a total of 70 patient cases were prepared and discussed. There were no instances of failure to discuss, and as such, was significantly reduced after the implementation of NTB (Mann-Whitney U test, p = 0.0004). The average number of patient cases discussed per meeting pre- and post-NTB implementation did not change (Mann-Whitney U test, p > 0.1) and meeting duration was the same.

Conclusions:
Introduction of the NTB did not change the weekly number of cases discussed, but did significantly reduce the failure to discuss rates for ENT MTB cases. Reducing failure to discuss rates could decrease the overall time to clinical decision and the initiation of treatment, which could potentially improve patient outcomes. Additional studies are needed to examine the impact of digital solutions on the quality of clinical care.