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counts consecutively for five years. While exploring the changes in blood cells and cumulative dose, the correlation between dose and the quantity of peripheral blood cells was also discussed. Individual doses were recorded by dose monitoring system. The counts of peripheral blood cell were based on the physical examination data of the workers of the annual physical examination in the hospitality-test, SD-T test and Variance analysis were used to analyze the radiation dose-response changes of the peripheral blood cell. Correlation analysis was used to analyze the correlation between the number of peripheral blood cells and the cumulative dose.

Results: The results of this study showed that compared with the control group, the number of white blood cells (WBCs), the number of hemoglobin (Hb) and the ratio of eosinophils (EO%) in the study group decreased ($P < 0.05$). Correlation analysis between the average cumulative dose in different years and the number of peripheral blood cells in different groups showed that the average cumulative dose of nuclear medicine group in 2016 was negatively correlated with WBC ($r = -0.602$, $P < 0.05$) and NE% ($r = -0.596$, $P < 0.05$). There was a significant positive correlation between the average cumulative dose of the radiological diagnosis group in 2015 and MO% ($r = 0.530$, $P < 0.01$). For the radiologists' group, there was a significant negative correlation between the average cumulative dose and the number of WBCs in 2016 ($r = -3.37$, $P < 0.05$), and there was a significant negative correlation between the average cumulative dose and RBC in 2017 ($r = -4.12$, $P < 0.05$).

Conclusion: The results of the study suggest that the blood cell levels of workers exposed to low-dose ionizing radiation for a long time can show dynamic changes, and relevant workers should take appropriate protection measures and regularly monitor peripheral blood cell indicators.

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Quality Assurance of Radiotherapy During the Covid-19 Pandemic: Impact on Peer Review in 14 Regional Cancer Centers Across Ontario

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Purpose/Objective(s): Quality Assurance (QA) is an integral part of the delivery of Radiotherapy (RT). Peer review (PR) is an essential component of the QA process mandated by Cancer Care Ontario (CCO). The COVID-19 pandemic has caused significant disruptions to cancer care worldwide. We aimed to investigate PR rates across all regional cancer centers in Ontario during the pandemic.

Materials/Methods: Using a provincial database maintained by CCO, PR data regarding completed curative and palliative RT courses were reviewed from December 2014 to November 2020. Peer reviews reported completed in March 2020 onward were considered to be completed during the pandemic. The monthly PR rates of 2019 were used as a baseline comparator. Wilcoxon signed-rank test (two-tailed) was used to determine significance in PR rates and courses of RT delivered. A P -value of < 0.05 was considered significant.

Results: A total of 24,936 radical courses and 18,759 palliative radiotherapy courses were completed in Ontario during the first 8 months of the pandemic. We found no difference in the average number of RT courses the year prior compared to during the pandemic for radical (3117/month vs 3382/month, $P = 0.078$) or palliative courses (2344/month vs 2227/month, $P = 0.195$). PR rates of radical RT were significantly decreased compared to the previous 12-month time period 86.1% vs 88.5% (95% CI: 0.6%-4.6% $P = 0.014$). Palliative RT also had a decrease in PR from 61.7% to 56.6% (95% CI: 1.4%-7.2%, $P = 0.016$). In the 2 immediate months following March 2020, there was a decrease of PR rates with radical RT PR rates nadiring at 83% and palliative RT nadiring a 53% PR rate, the lowest since April 2016 and January 2018 respectively. This trend

quickly reversed and PR rates increased in subsequent months. Analysis by disease site indicated a significant decrease compared to the prior year in disease site-specific PR rates for radical courses within breast (87.8% vs 90.3%, $P = 0.16$) and gynecologic (76.9% vs 84.1%, $P = 0.049$) disease sites respectively. Lung, Head and Neck, Gastrointestinal and CNS sites had no significant differences in PR rates when compared to the preceding year.

Conclusion: Peer review rates had an initial decrease across regional cancer in both radical and palliative intent radiation. Overall, peer review rates remain modestly lower than the period immediately preceding the pandemic. All centers still maintained a high rate of PR during the initial 8 months of the COVID 19 pandemic.

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Perceptions of Disease-Site Specific Chart Rounds at an Academic Institution

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Purpose/Objective(s): Despite the prevalence and importance of peer review, there remains a paucity of evidence on different formats of peer review. The purpose of this study was to understand current perceptions of disease-site specific chart rounds at a single institution considering transitioning from practice-site specific chart rounds to disease-site specific chart rounds.

Materials/Methods: An electronic survey was distributed to faculty (24 attendings and 18 physicists), dosimetrists, nurses, therapists, and trainees at an academic institution that has weekly departmental chart rounds. The survey consisted of 13 questions on demographics, perceptions of current chart rounds, and perceptions of disease-site specific chart rounds. ANOVA and Chi-square testing were used to analyze the data. Criteria for statistical significance was $P < 0.05$. This study was approved by the IRB.

Results: A total of 35 (55%) responses were received, 18 of 24 (75%) attendings responded. Of all respondents, 51% were attendings, 23% were physicists, 14% were residents, 9% were dosimetrists, and 3% was a therapist. Attending responses were distributed across all disease sites which included CNS, Head and Neck, Thoracic, Breast, GI, GU, GYN, Pediatric, Palliative, Skin, Sarcoma, and Hematologic ($P = 0.218$). Most respondents (19; 54%) favored transitioning to disease-specific chart rounds (26% strongly agreed and 29% agreed, whereas 11% disagreed and 9% strongly disagreed). Most respondents (23; 66%) believed disease-specific chart rounds would improve patient safety (26% strongly agreed and 40% agreed, while 11% disagreed and 3% strongly disagreed). Most respondents (27; 77%) believed disease-site specific chart rounds would improve the quality of patient plans (29% strongly agreed and 49% agreed, whereas 11% disagreed and 3% strongly disagreed). Most respondents (23; 66%) believed disease-site specific chart rounds would improve education for trainees (29% strongly agreed and 37% agreed, while 11% disagreed and none strongly disagreed). Most attendings favored transitioning to disease-specific chart rounds (50% agreed and 17% disagreed). All physicists favored transitioning to disease-specific chart rounds. Respondents who favored transitioning to disease-specific chart rounds were significantly more likely to believe that disease-specific chart rounds would improve patient safety ($P < 0.0001$), improve the quality of patient plans ($P < 0.0001$), and improve time efficiency ($P = 0.0156$). Of the respondents who did not favor transitioning to disease-specific chart rounds, 85.7% disagreed it would improve time efficiency.

Conclusion: Most respondents favored transitioning to disease-specific chart rounds. Furthermore, most respondents believed disease-specific chart rounds would improve patient safety, the quality of patient plans, and trainee education. Further research will be conducted and presented measuring the impact after implementation.