DO THE EXTENT AND SYMPTOMS OF HODGKIN'S DISEASE AFFECT SPERM QUALITY? MV Tolentino, Ayzman, AJ Thomas and A Agarwal. Andrology Laboratory Department of Urology, Cleveland Clinic Foundation, Cleveland, OH.

Objectives: Hodgkin's disease commonly afflicts men in the peak of their reproductive years, and most of these patients are subfertile. Whether this state is primarily due to an intrinsic germ-cell defect, therapy, a direct effect of the disease on spermatogenesis, or any combination of these factors is controversial. This study examines whether the extent of Hodgkin's disease at presentation affects semen quality and whether any particular sign or symptom is related to fertility.

Design: The results of semen analyses performed before and after cryopreservation in patients presenting at various stages of Hodgkin's lymphoma were retrospectively correlated with the extent of disease and with the most common presenting signs and symptoms.

Materials and Methods: We reviewed the records from 39 patients with newly diagnosed Hodgkin's lymphoma, who presented for sperm banking before definitive chemotherapy or radiation therapy or both. Semen specimens were evaluated using a computer-assisted semen analyzer. The nitrogen vapor technique using Test-Yolk buffer with glycerol was used for cryopreservation. The motile sperm count and motion parameters (motility, curvilinear velocity, linearity, amplitude of lateral head movement [ALH] and motility index), before and after cryopreservation were determined and analyzed for each disease stage, sign, and symptom.

Results: Of the 39 men with Hodgkin's disease, 3 (8%) presented at stage I, 20 (51%) at stage II, 12 (31%) at stage III, and 4 (10%) at stage IV. Owing to fewer numbers of patients in stages I and IV, only patients in stages II and III were used. There was no statistical difference in sperm characteristics groups between these two groups, either before or after cryopreservation. The change in semen characteristics after sperm freezing between these two groups were likewise insignificant. The presence or absence of weight loss, fever, neck masses, upper respiratory symptoms, or chest masses or pain did not associate with the various sperm motion parameters of the sperm, either before or after cryopreservation. Only the post-thaw ALH value among patients presenting with chest pain or masses was significantly different from pre-freeze levels (P = .0012).

Conclusions: The exact mechanism of poor semen quality seen in the majority of Hodgkin's lymphoma patients is not clear. Our study shows that the extent of the disease per se does not relate to the sperm motion characteristics in these patients. In addition, there is no association between the presence and severity of their presenting signs and symptom and their semen parameters. With the advent of intracytoplasmic sperm injection and other micromanipulation techniques, sperm banking remains necessary owing to the decrease in sperm quality. Thus, continued research into improving cryopreservation techniques is warranted.