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**Title:** Prevalence of MRSA nasal carrier rate in hematology patients of Benghazi Medical Center using PCR-based method; first study in Libya

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**Body:** Introduction: Carriers of multi drug resistant staphylococcus aureus (MRSA) may spread or develop infections if not discovered and properly treated. Knowing MRSA carrier status would be useful especially for hematology patients on chemotherapy. Aim and objective The aim of the study was to determine prevalence of nasal MRSA carrier rates in hematology patients of Benghazi Medical Center (BMC). Method: Hematology patients admitted to hospital or under regular follow up in clinic were included and consent obtained. Nasal swabs (APTACA) were taken in standard way. Samples were analyzed for the presence of MRSA by using PCR based system (Gene expert machine-GXMRSA-120). The following data were collected; age, gender, weight, height, underlying hematological diagnosis, history of chemotherapy, hospital admission or MRSA swab in the previous 6 months and long term intravascular device insertion. Results: 107 patients were screened. 49 (45.7%) were males. Mean age was 48 years and body mass index was 25 kg/m<sup>2</sup>. 5 out of 107 patients tested positive for nasal MRSA. 4 out of 5 had lymph proliferative disorders and all received chemotherapy. The rest of results are outlined in table.

	MRSA positive n = 5 (5%)	MRSA negative n = 102 (95%)
Age (mean)	52 years	47 years
Males	3 (60 %)	46 (45%)
Myeloproliferative disease	1 (20%)	12 (12%)
Lymphoproliferative disease	4 (80%)	45 (44%)
Bleeding disorder	0 (0%)	11 (11%)
Other disease	0 (0%)	4 (4%)
Chemotherapy (H/O)	5 (100%)	62 (61%)
MRSA (H/O)	0 (0%)	0 (0%)
Intravascular device	0 (0%)	0 (0%)

Conclusion: 4.5% of patients screened in hematology department of BMC were nasal carriers for MRSA. This is the first study in Libya using PCR based method.