doxorubicin (Dox), cisplatin (CDDP), ifosfamide (Iflo) & etoposide (Eto); the 2nd protocol, "OGS-99-enhanced", involved OGS-99 drugs with enhanced supportive care including growth factors. The 3rd dose-dense, "OGS-12" protocol, involved administration of 8 sequential doublets of the 3 most active drugs, (Dox, Cis & Iflo), universal growth factor prophylaxis & targeted nutritional support including IV Iron if required. Event free survival (EFS), overall survivals (OS) and toxicity were estimated using retrospective chart review in OGS-99 & OGS-99-enhanced protocols & prospectively in OGS-12 protocol.

Results: A total of 41, 94 & 385 treatment naive, consecutive, non-metastatic, extremity patients were treated with OGS-99 (year 2000-2005), OGS-99-enhanced (2010) & OGS-12 (2011-2016) respectively. At a median follow-up of 19(3-72), 85(2-99) and 36(6-78) months, the 5 year EFS rates are 36%, 50% and 69% in OGS-99, OGS enhanced & in OGS-12 respectively. The corresponding rates of 5 year OS are non-evaluable, 60% & 83% respectively. OGS-12 protocol fared better with respect to grade ≥3 toxicities; febrile neutropenia (40%), thrombocytopenia (36%), anaemia (51%) with 4(1%) chemo toxic deaths & compliance to therapy.

Conclusions: Sequential adaption of more rational chemotherapy regimens, including conception of novel "OGS-12" protocol with, better dose density and elimination of ineffective drugs, enhanced supportive care & thereby reducing the need for dose reductions, resulted in marked improvement in outcomes of non-metastatic osteosarcoma patients. This sustainable, economic efficient strategy is worthy of wide adaption.

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1634P Evolution of novel, low cost, sustainable osteosarcoma care over two decades: Reducing inefficiencies & improving outcomes

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Background: Osteosarcoma care is challenging especially in lower and middle income countries with limited resources & increasing patient volumes. We need to reduce inefficient practices & reallocate resources to strategies, which can make the greatest & sustainable improvements in patient care.

Methods: We compared the outcomes in non-metastatic osteosarcoma patients treated with 3 sequential non-HD-MTX based combination chemotherapy protocols at a single tertiary care center in India over 2 decades. The 1st protocol "OGS-99", involved dose-intense, alternating doublets of, 4 drugs,