

## Post transplant bone disease

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Despite improvement in some chronic kidney disease (CKD) metabolic derangements of bone and mineral metabolism after kidney transplantation, bone disease remains a significant problem. Kidney transplant recipients are at increased risk of bone mineral density (BMD) loss, fractures and osteonecrosis, all of which are associated with substantial morbidity. The pathogenesis of post transplant bone disease is multi-factorial including but not limited to interactions of the complex abnormalities in pre-transplant mineral homeostasis, renal osteodystrophy, the degree of persistently impaired kidney function, peri-transplant alternations in calciotropic and *phosphotropic* regulatory hormonal pathways, and the potential deleterious skeletal effects of immunosuppressive therapy.

Management of post transplant bone disease is challenging given the limitations of the available diagnostic methods and the lack of proven benefit of available therapies to reduce fractures. Despite the evidence that both bisphosphonates and vitamin D receptor agonists (VDRA) attenuate the loss in BMD following successful kidney transplantation, these agents have not been clearly shown to reduce fractures. Moreover, there is no consensus on how to monitor the response to therapy and the optimal duration of therapy is unknown. Therefore, therapeutic decisions should be guided by consideration of the interplay of multiple factors including the severity of BMD loss, the presence of risk factors for osteoporotic fragility fractures, disordered mineral metabolism, underlying bone disorder, and the level of kidney function.

### Biography

Hala M. Alshayeb is an assistant professor of Medicine and the Division Chief of Internal Medicine in Hashemite University in Jordan. She completed her transplant nephrology fellowship from University of Chicago, Nephrology and Internal Medicine training from University of Tennessee. She has been working in clinical research area in CKD-MBD and post transplant disease and has published many research articles, review articles in peer reviewed journals. She has received the first place award for clinical research in southern Society meeting for young investigator.

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