Physician connect

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Dear Doctor,

Greetings from Micro Labs Limited. We are happy to bring you 'Physician connect' which contains latest and interesting news in the field of Medicine.

This issue contains

- Serial Bone Density Measurement and Incident Fracture Risk Discrimination in Postmenopausal Women
- Transcatheter Valve-in-Valve Aortic Valve Replacement as an Alternative to Surgical Re-Replacement
- Bochdalek hernia with Ectopic Kidney

Should you require any specific article or medical information, please feel free to contact us at medicalservices@microlabs.in

Looking forward to your valuable feedback

Best Regards,

Medical Team, Micro Labs Limited

Serial Bone Density Measurement and Incident Fracture Risk Discrimination in Postmenopausal Women

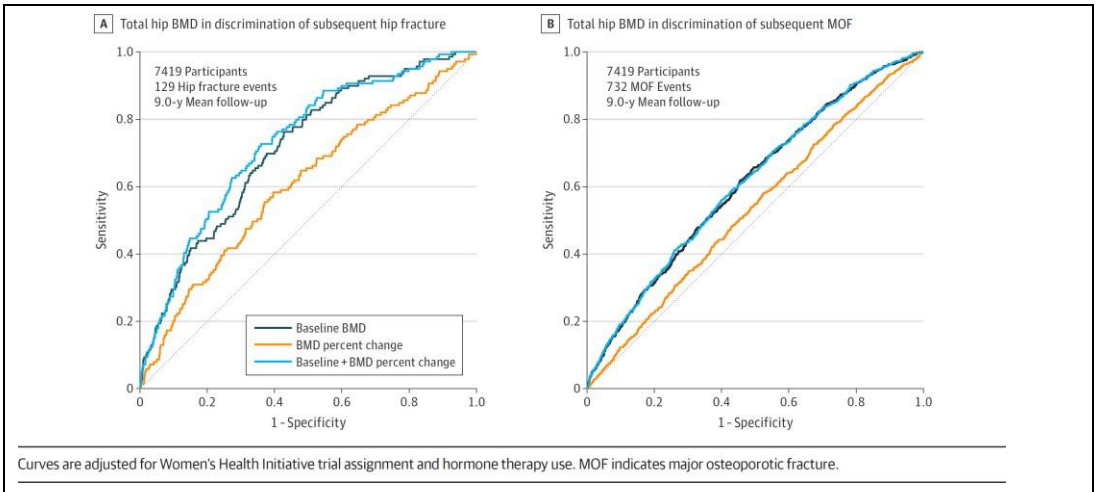
Bone mineral density (BMD) is well recognized as a strong predictor of fracture risk. The United States Preventive Services Task Force (USPSTF) recommends screening for osteoporosis with BMD measurement in women aged 65 years or older. Repeated bone mineral density (BMD) testing to screen for osteoporosis requires resources. For patient counseling and optimal resource use, it is important for clinicians to know whether repeated BMD measurement (compared with baseline BMD measurement alone) improves the ability to discriminate between postmenopausal women who will and will not experience a fracture.

A second BMD assessment approximately 3 years after the initial measurement was not associated with improved discrimination.

The study was done to assess whether a second BMD measurement approximately 3 years after the initial assessment is associated with improved ability to estimate fracture risk beyond the baseline BMD measurement alone. The Women's Health Initiative is a prospective observational study. Participants in the present cohort study included 7419 women with a mean (SD) follow-up of 12.1 (3.4) years between 1993 and 2010 at 3 US clinical centers. Data analysis was conducted between May 2019 and December 2019.

Incident major osteoporotic fracture (ie, hip, clinical spine, forearm, or shoulder fracture), hip fracture, baseline BMD, and absolute change in BMD were assessed. The area under the receiver operating characteristic curve (AU-ROC) for baseline BMD, absolute change in BMD, and the combination of baseline BMD and change in BMD were calculated to assess incident fracture risk discrimination during follow-up.

Of 7419 participants, the mean (SD) age at baseline was 66.1 (7.2) years, the mean (SD) body mass index was 28.7 (6.0), and 1720 (23%) were non white individuals. During the study follow-up (mean [SD] 9.0 [3.5] years after the second BMD measurement), 139 women (1.9%) experienced hip fractures, and 732 women (9.9%) experienced major osteoporotic fracture. In discriminating between women who experience hip fractures and those who do not, AU-ROC values were 0.71 (95% CI, 0.67-0.75) for baseline total hip BMD, 0.61 (95% CI, 0.56-0.65) for change in total hip BMD, and 0.73 (95% CI, 0.69-0.77) for the combination of baseline total hip BMD and change in total hip BMD. Femoral neck and lumbar spine BMD values had similar discrimination for hip fracture.



Characteristic Curves for Total Hip Bone Mineral Density (BMD) in Discrimination of Hip Fracture and Major Osteoporotic Fracture

For discrimination of major osteoporotic fracture, AU-ROC values were 0.61 (95% CI, 0.59-0.63) for baseline total hip BMD, 0.53 (95% CI, 0.51-0.55) for change in total hip BMD, and 0.61 (95% CI, 0.59-0.63) for the combination of baseline total hip BMD and change in total hip BMD. Femoral neck and lumbar spine BMD values had similar ability to discriminate between women who experienced major osteoporotic fracture and those who did not. Associations between change in bone

density and fracture risk did not differ by subgroup, including diabetes, age, race/ethnicity, body mass index, or baseline BMD T score.

The findings of this study suggest that a second BMD assessment approximately 3 years after the initial measurement was not associated with improved discrimination between women who did and did not experience subsequent hip fracture or major osteoporotic fracture beyond the baseline BMD value alone and should not routinely be performed.

Source: Crandall CJ et al. JAMA Intern Med. 2020 July [Published online ahead of print]. doi:10.1001/jamainternmed.2020.2986.

Transcatheter Valve-in-Valve Aortic Valve Replacement as an Alternative to Surgical Re-Replacement

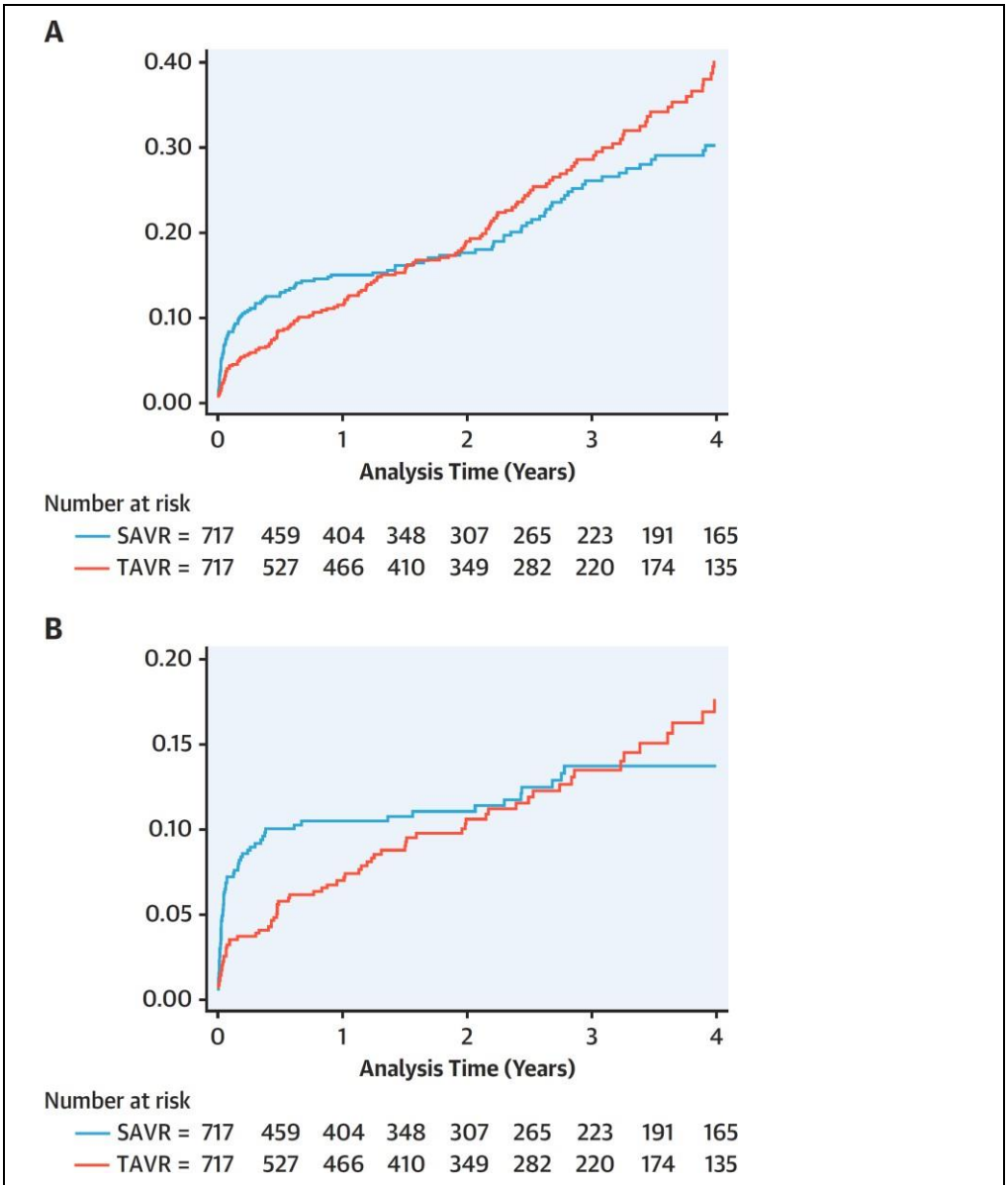
Valve-in-valve (VIV) transcatheter aortic valve replacement (TAVR) and redo surgical aortic valve replacement (SAVR) represent the 2 treatments for aortic bioprosthesis failure. Clinical comparison of both therapies remains limited by the number of patients analyzed. The purpose of this study was to analyze the outcomes of VIV TAVR versus redo SAVR at a nationwide level in France.

VIV TAVR was observed to be associated with better short-term outcomes than redo SAVR.

Based on the French administrative hospital-discharge database, the study collected information for patients treated for aortic bioprosthesis failure with isolated VIV TAVR or redo SAVR between 2010 and 2019. Propensity score matching was used for the analysis of outcomes.

A total of 4,327 patients were found in the database. After matching on baseline characteristics, 717 patients were analyzed in each arm. At 30 days, VIV TAVR was associated with lower rates of the composite of all-cause mortality, all-cause stroke, myocardial infarction, and major or life-

threatening bleeding (odds ratio: 0.62; 95% confidence interval: 0.44 to 0.88; p = 0.03).



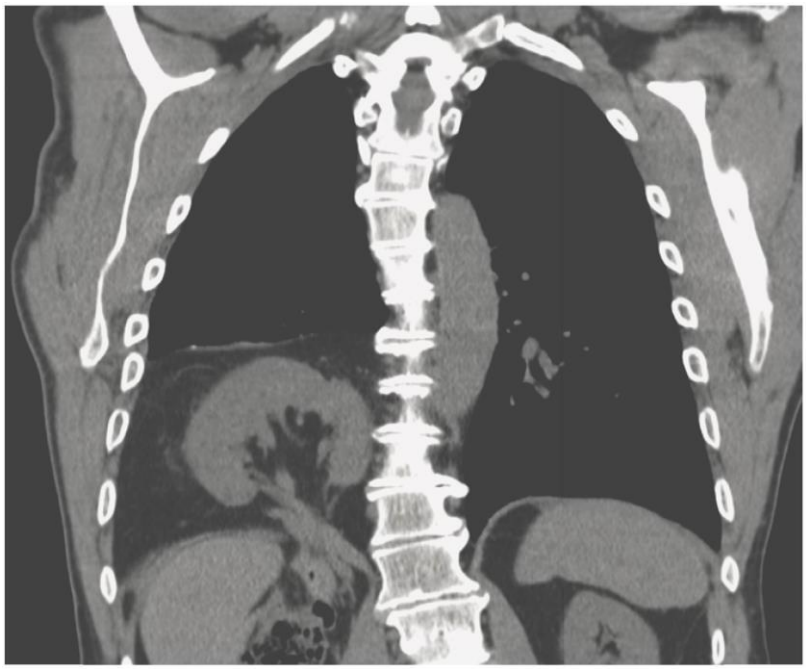
Incidences for all-cause death (A) and cardiovascular death (B) in patients with a previous prosthesis valve treated with redo SAVR compared with VIV TAVR.
SAVR = surgical aortic valve replacement; TAVR = transcatheter aortic valve replacement; VIV = valve-in-valve.

During follow-up (median 516 days), the combined endpoint of cardiovascular death, all-cause stroke, myocardial infarction, or rehospitalization for heart failure was not different between the 2 groups (odds ratio: 1.18; 95% confidence interval: 0.99 to 1.41; p = 0.26). Rehospitalization for heart failure and pacemaker implantation were more frequently reported in the VIV TAVR group. A time-dependent interaction

between all-cause and cardiovascular mortality following VIV TAVR was reported (p-interaction <0.05). VIV TAVR was observed to be associated with better short-term outcomes than redo SAVR. Major cardiovascular outcomes were not different between the 2 treatments during long-term follow-up.

Source: Deharo P et al. JAAC. 2020 Aug; 76(5): 489-499

Bochdalek hernia with Ectopic Kidney



A 77-year-old man presented to the emergency department with nausea, vomiting, and diarrhea. He had no known medical or surgical history and reported no shortness of breath or cough. Physical examination was notable for decreased breath sounds in the lower third of the right side of the chest, and chest radiography revealed an opacity in the right hemithorax.

Focused assessment with ultrasonography revealed no evidence of a pleural effusion, but the right kidney could not be identified. A computed tomographic scan of the chest showed a right Bochdalek hernia containing the kidney as well as hepatic flexure of the colon. A Bochdalek hernia results from a congenital posterolateral diaphragmatic defect. It is a common incidental finding, and the hernia is often small and contains only fat. Large Bochdalek hernias containing the kidney, as occurred in this patient, are less common. No specific treatment was initiated for the hernia, and the patient's gastrointestinal symptoms abated with supportive care.

Source: Almeida CC et al. N Engl J Med 2020 Jul; 383:5 [online ahead of print] DOI:10.1056/NEJMicm1915200