

IBEX Innovations

Supporting Healthy Ageing



Case Study 01 - Margot's Story



Osteoporosis is a life changing medical condition

Dr Margot McBride is a research radiographer who has recently taken up a post as Clinical Advisor for IBEX. Margot is an amputee and was diagnosed with Cushing syndrome 7 years ago.

The clinical manifestations of this disorder vary, creating challenges for clinicians as patients present with varying signs and symptoms which can be mild to non-specific. Diversity in clinical presentation can significantly delay diagnosis and patients may be at a late stage of the disease processes before they are diagnosed. as a result, Margot's osteoporosis took almost 6 years to diagnose. Her story is powerful from the onset of her Cushing's to being diagnosed with osteoporosis.

Dr. Margot McBride's Story

Unfortunately, I developed osteoporosis which is a comorbidity that can occur in Cushing's patients normally induced by over exposure to cortisol in the blood. In my case, I was prescribed glucocorticoid steroids for a previous condition which is thought to have induced my Cushing syndrome. Glucocorticoid-induced Osteoporosis (GIOP) in Cushing's remains the most common form of drug-induced secondary osteoporosis. GIOP creates weaknesses in bones which are easily fractured and like Cushing's, is more prevalent in women than men.

GPs often refer patients to a range of Health Professionals for multiple tests and diagnostic imaging scans prior to a definitive diagnosis. In my case, I was experiencing pain in my spine and was eventually referred to an endocrinologist who discovered an adenoma in my right kidney. Although they suspected it could be Cushing's, I still had to undergo a series of tests and eventually I finally received my diagnosis. I ended up sustaining high levels of cortisol over these years which severely reduced my bone density.

Being an amputee and walking with a prosthetic leg is always challenging, amputees are prone to falls. I never actually had experienced a fracture until I fell and broke my pelvis, and this led to my osteoporosis diagnosis being confirmed by referral for a DXA scan. From that day onwards my confidence in walking reduced and my mobility challenges increased, and I am now more reliant on using my wheelchair.

The Impact - My Message to Patients:

From a physical perspective, osteoporosis highly increases your risk of falling and fracturing your bones. For amputees, the lack of mobility and confidence in walking can be further exacerbated by osteoporosis. Amputees like me with non-bending prosthetics are unable to bend their knees to react to a fall and need to be even more careful if they have osteoporosis. A fall could be life-threatening.

Unfortunately, amputees are not routinely referred for a DXA scan so these patients may be unaware that they have osteoporosis. This is also the case in Cushing's patients who are likely to be developing osteoporosis for years, and, even after a fall, a conventional X-ray will not lead to diagnosis. On top of these physical challenges, bone diseases can have a huge psychological impact on patients due to the inability to do everyday tasks.

Most patients like myself develop a fear of being on long-term drugs whilst being conscious of the fear of fracture and balancing the risk of side effects against the danger of fractures. This can undoubtedly also influence patients' quality of life in terms of their work, personal, and social lives.

Although I have found my osteoporosis to be life-changing, this has led me to become passionate about raising awareness and the need for much earlier diagnosis to reduce the life long effects of osteoporosis.



Earlier Diagnosis

Through diet and exercise, bone strength can be improved and maintained to a certain extent. However, due to the severity of my osteoporosis, I've had to learn to accept and live with it. My experience isn't particularly rare - there are millions of other people suffering from this condition who won't find out until it's far too late. If I'd been screened earlier, I could have begun treatment earlier and it's likely that my osteoporosis would be much less severe today.

There are currently no robust methods for screening patients at risk of developing osteoporosis and the need for one is vital. I'm referring particularly to women who are susceptible to low bone mineral density, whether it's genetic, disease-related, or menopausal. Access to DXA is scarce and waiting lists are devastatingly long, this has been exacerbated by the pandemic and the growing referral lists for radiology services.

Although the primary purpose of this story is to spread awareness and encourage people to think about their bone health, I want to take the opportunity to briefly shed some light on IBEX, who are working to provide a solution to the osteoporosis crisis.

As mentioned in the introduction, I recently joined IBEX as a Clinical Advisor. I firmly believe that the IBEX BH technology could improve the quality of life for countless people who are at risk of osteoporosis. The IBEX BH software measures bone health from a standard X-ray, which means that if a patient has a fracture, such as a wrist fracture (which is often an early warning sign of poor bone health) they could also be screened for osteoporosis.



IBEX BH also provides the opportunity to identify other medical conditions alongside osteoporosis. If my low bone mass had been identified from the X-rays taken prior to my amputation, I would have been prescribed medical therapy and my high cortisol levels would have been identified in blood tests. This could have led to an earlier diagnosis of Cushing's.

Please head to IBEX's website if you're looking to learn more - ibexinnovations.co.uk



My Advice for People at Risk:

Being a Diagnostic Radiographer, I was very informed about osteoporosis prior to my diagnosis, however, now I have personal experience of living with this condition, I'd like to think that I'm in a position to provide some advice for those at risk.

You gradually start losing bone density around the age of 35 and by the age of 50 or above (especially if you're female), it's highly likely that your bone mineral density is changing and that you are more susceptible to develop osteoporosis. Please mention this to your GP and make sure that you get advice. Also, I would say that it's important to ensure that you're getting enough vitamin D regardless of your age, exercise, and a healthy diet.

A major issue amongst people visiting their GP is that patients often don't fully describe their signs and symptoms or that they ask to be referred for a routine DXA, particularly when prescribed hormone therapy.

On average, you're only with your doctor for around 10 minutes and it's not uncommon for patients to feel rushed and play down their symptoms because they don't want to bother their GP. Please remember, they are there to help you and can refer you to an orthopaedist or rheumatologist who are experts in bone health

There are also excellent sources of guidance and advice on the website for example the NHS - [nhs.uk/conditions/osteoporosis](https://www.nhs.uk/conditions/osteoporosis) and the Royal Society of Osteoporosis UK - [theros.org.uk](https://www.theros.org.uk)

IBEX BH
Bone Health



IBEX Innovations Limited, Explorer 2, NETPark, Sedgefield, TS21 3FF, UK

