

Podcast transcript

Q1: “So, could you tell me what is melanoma and how is it diagnosed?”

“Melanoma is a form of skin cancer. It is less common than basal cell carcinomas and squamous-cell carcinomas but it is more important in that it is more frequently associated with serious disease, indeed deaths from skin cancer.

“Most melanomas occur on the skin and they are diagnosed really by inspection. They’re noticed by patients, referred up to hospital by general practitioners and the dermatologist usually, but sometimes plastic and reconstructive surgeons, make the diagnosis based upon what it looks like and then what the pathologist sees when that lesion is removed and looked at down the microscope.

“And melanoma has become enormously more common in the last century. And even the last data from NCIN or from the Cancer Registry shows that the incidence is increasing dramatically, particularly in baby-boomers; particularly in people who are 60 and older and especially in men.

“So although melanoma is cured by early removal, we are concerned that the death rates from melanoma will increase. Partly because of that increase in numbers but also because actually when one is older and, actually for a reason we don’t fully understand, men do less well with melanoma. So we fear that the mortality rate will increase from melanoma.”

Q2: “So what is the current practice when it comes to treating patients diagnosed with melanoma?”

“Well with respect to the sun, we know that melanoma is caused by recreational sun exposure, that is mainly sunny holidays. And because around 10 per cent of melanoma patients have another melanoma, a second or more melanomas, then the general practice is to advise melanoma patients at diagnosis to cut down that causal sort of sun exposure. That is to go on holiday but to protect the skin so that they don’t burn. And the trouble is that in a country like the United Kingdom where we don’t get much sun throughout the year many people tank up their vitamin D supplies on that sunny holiday. And so if the melanoma patients heed what we say, which we hope they do, and cut down their

sun exposure then the probability is that they'll end up having insufficient levels of vitamin D and that's not good for health generally."

Q3: "And so what are the benefits of healthy levels of vitamin D for patients with melanoma, or for people generally as well?"

"Well, we know for sure that vitamin D is crucial for bone health so that when levels are low in childhood then rickets occurs. And when levels are low in adult life then the bones become thinned and fractures, as we get older, are very serious events, particularly of the hip. And so it's widely recognised that we should encourage a healthy level just for the bones. But there is a lot of evidence that vitamin D is important for additional aspects of health, evidence that is for many conditions controversial. But the general consensus is that vitamin D is crucial for bone health and probably important for a number of other aspects of good health.

"The controversy is because there are hundreds of studies in the journals, in the literature, which report an association between low vitamin D levels and a number of different diseases. And I suppose there are simply too many of them for all to be real. And the other issue is that vitamin D levels are higher in people who are thinner, healthier and more active. And the controversy stems from that. Essentially the critics would say the levels are higher in a given condition not because vitamin D has any fundamental relationship with that condition but because higher levels are just a marker of better health. So within this mass of evidence I believe that there are some very important effects of vitamin D and there are others that are reported merely as an association with a better lifestyle. So it's that that's the controversy, trying to sort out what is a causal effect. What is cause and effect rather than just an association.

"In 2009 the University of Leeds, my research group in fact, reported a study in which we observed that people who had low vitamin D levels when they were diagnosed with melanoma had thicker more aggressive tumours and they also did less well, even if one took account of the thickness of the tumour. So we showed an association between low vitamin D levels and a poor outcome. However, as I referred to earlier with respect to controversy and vitamin D, that's just an association. I can't yet prove that vitamin D was causal in that. And I especially can't prove that supplementing the diet with vitamin D will reduce the death

rate from melanoma. But I do think that those data suggest that we shouldn't allow the vitamin D levels in melanoma patients to fall because of what we advise patients to do about sun exposure. So it's not a proven causal relationship but it's sufficient to lead to concern that we shouldn't make it worse by advising people to stay out of the sun."

Q4: "And what do health professionals currently advise people with melanoma in terms of sun exposure?"

"Common practice is people to be advised to cut down their sun exposure generally. And because many people in the United Kingdom have low vitamin D levels anyway then that is likely to result in rather too low levels of vitamin D for general health and possibly for melanoma specifically."

Q5: "So what does NICE recommend for managing suboptimal levels of vitamin D?"

"Well, what the NICE guideline on melanoma recommends is that we should at least know what the level is at diagnosis. We should in secondary care, that's in hospital, measure the level. So there are many cancer patients who after diagnosis worry about things like vitamin D and the need to supplement their diet and we argue that it's best to know what the levels are at that time so you can make a logical approach to its management. So if we measure the levels and we find that levels are very low then it's clear that we should follow national policies on supplementation. If the levels are normal then it's clear that those patients don't, particularly at that time anyway, require supplements. And it's better not to supplement if you have a normal level. And finally, we might measure those levels and find that they're high, maybe because the patients are already taking lots of supplements and possibly even fortified foods. And we have some theoretical worries that having high levels is potentially harmful. So measuring those levels at diagnosis so that we can manage sun exposure and vitamin D subsequently is what NICE advises."

Q6: "You mentioned national policies on vitamin D. Could you expand on what those are please?"

Well, NICE has issued guidelines on sun exposure with respect to vitamin D and because low vitamin D levels are clearly associated with poor

bone health most regions have a policy on supplementation. For melanoma management teams, that's the MDTs, managing melanoma however, I think there is a feeling that it's not entirely clear how they should manage suboptimal levels for melanoma patients. There are many controversial areas within the management of vitamin D that remain less than clear so that there remains dispute about what's the optimum level of vitamin D in the blood. There is dispute about possible ill effect of high blood levels. There are differences in terms of whether high loading doses should be used or whether a slow increase is preferable for melanoma.

"These areas of lack of clarity, I think have been a problem. However, the Scientific Advisory Committee on Nutrition, or SACN, has reviewed many of these areas of controversy and they will produce a draft report in this summer of 2015 and we hope that that committee will address these areas of confusion and that their output will be of practical value to melanoma MDT teams in managing vitamin D levels in the future."

Q7: "What measures can healthcare professionals take to put NICE's recommendations into practice?"

"I think that it would be helpful to review the output from the Scientific Advisory Committee on Nutrition when it's available and to review NICE guidelines on sun exposure. But to help in that implementation process we have also produced some information leaflets for patients on vitamin D but also for healthcare professionals, measuring vitamin D levels in melanoma patients. And these leaflets are available from a website, www.genomel.org, and we hope these will give practical advice, as I said, both for patients and healthcare professionals.

"So both leaflets for patients and for healthcare professionals describe the reasons for measuring levels. What we mean by having low, normal or high levels and the theoretical concerns about the latter and, finally, practical advice as to how low levels should be managed.

"There is vitamin D, of course, in food and there's quite a lot in salmon and other fatty fishes, in mushrooms for vegetarians, in eggs and in milk. But actually it's quite difficult to get sufficient vitamin D from those foods alone. For example, salmon contains vitamin D but only if it's wild not if it's farmed. And in practice, most people in this country do not maintain a normal vitamin D based on their diet alone. In some

countries, such as the United States, this is recognised and so many foods are supplemented, like orange juice, soya milk. All sorts of foods are supplemented there. But this is not true in Britain. Actually few foods are supplemented. There are some yoghurts recently released with vitamin D in them, for example. So if you have a diet, if you're a vegetarian for example, it's really quite difficult to eat enough vitamin D even if you have a heck of a lot of soya milk and mushrooms. It's quite difficult to do that. And so supplementation in the form of vitamin D3 capsules, if you are sun avoidant, is really the most sensible way of addressing deficiency.

"The NHS has, on its various websites such as NHS Choices, for a long time recognised that the sun avoidant tend to have low vitamin D levels. The website recommends at least 10micrograms per day of vitamin D3 for individuals over the age of 65 or those who for cultural or health reasons are sun avoidant. And what we would argue is that melanoma patients, after diagnosis, are advised to be sun avoidant and this national advice therefore applies to them. However, because of the rather unpredictable levels in relation to what one calls sun avoidance we think it's preferable to measure levels and adjust accordingly."

Q8: "So just to clarify, could you tell me what you mean by sun avoidant people?"

"What I mean by that is that there is a lot of evidence that most people in Britain run at a suboptimal level of vitamin D through much of the year but certainly in the winter months. And we top it up as a result of relatively short periods of intense sun exposure in the summer. If you are sun avoidant that means that you might, for example, be wearing clothing for cultural or religious reasons which means that your skin simply isn't exposed to sufficient sun to top-up. It might be that you are frail or unwell and you're in a residential home or simply can't go out very much and that has the same effect, you can't top-up on your vitamin D. And after a diagnosis of skin cancer most physicians or surgeons will explain to patients that skin cancer is caused by the sun and therefore if you want to reduce risks of further skin cancer then you have to cut down your sun exposure significantly. That, for many people, means that they would go into the range where they're simply not getting enough sun exposure to manufacture sufficient vitamin D.

“So this is very common in all temperate climates. There is published data from the whole of Britain. There’s a paper by Hypernin et al demonstrating that many people up and down the United Kingdom have low levels much of the year, particularly where the incident light is less. So that particularly, for example in Scotland.

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