



## **Can cell phones cause breast cancer?**

To date, there have been no scientific studies suggesting that cell phones are associated with an increased risk of developing breast cancer. Until recently, we believed there was no such risk. However, two recent cases have caused us to rethink our position on this issue. The first case involves a 39 year old woman who for the past five years put her cell phone in her bra to improve the connectivity with her Bluetooth head-set. She felt warmth throughout her breast when she received calls, but thought nothing more about it until she felt a new pain in the right breast in the spot where she routinely placed her cell phone. The pain felt like “something underneath the chest wall pushing out”. She thought it might be a pulled muscle. She examined the area of the pain and felt a lump.

A subsequent mammogram showed a breast cancer in the area where she placed her cell phone, and a biopsy revealed it was an invasive breast cancer. She required a mastectomy, and examination of the removed breast tissue showed five separate tumors in almost the exact distribution corresponding to the shape of the cell phone in the area of the breast below where the phone was placed.

To our knowledge, this case was unique. We were unaware of any similar case, and concluded that it was just an unusual coincidence. That would have been the end of the story if we had not seen another similar case just a few weeks later. The second case occurred in a woman in her 50’s who for the past five years routinely wore her cell phone in her bra on the left side. Over the past few months she became aware of “twisting pain” in the left breast. The pain seemed to occur more frequently at the end of the day. She stopped wearing her cell phone and the pain disappeared. At about that same time, she noticed a change in the shape of her left breast. A subsequent mammogram showed a cancer in her breast directly below the spot where she placed her cell phone. A follow-up biopsy was positive for breast cancer.

Of course, these two cases could still be an unusual coincidence. Unless we learn of more cases, the most we can say is that these two cases should motivate us to explore the issue in more detail. Medical literature does give us some clues about the possibility of such a relationship. Recent studies from Sweden demonstrate that long-term cell phone use (defined as using a cell phone for more than 10 years) can double the risk of some brain cancers. Of note, the increased risk was seen only on the side of the head where the mobile phone was held.

We believe it is important to share this information with the public. It is easy for women to avoid putting their cell phones in their bras and, until we have more information, we encourage you to do so. The challenge of course, is to make sure that the relatively few women who do keep their cell phone in their bra are made aware of the risks. We ask our readers to help us in this effort by forwarding this message to friends and relatives. We also would like to know if there are other cases out there that have not been reported. If you know of similar cases, please contact us. In future issues of "Ask the Doctor" we will keep you posted on our findings as well as any update in the literature.

We appreciate your cooperation--it could help save lives!