

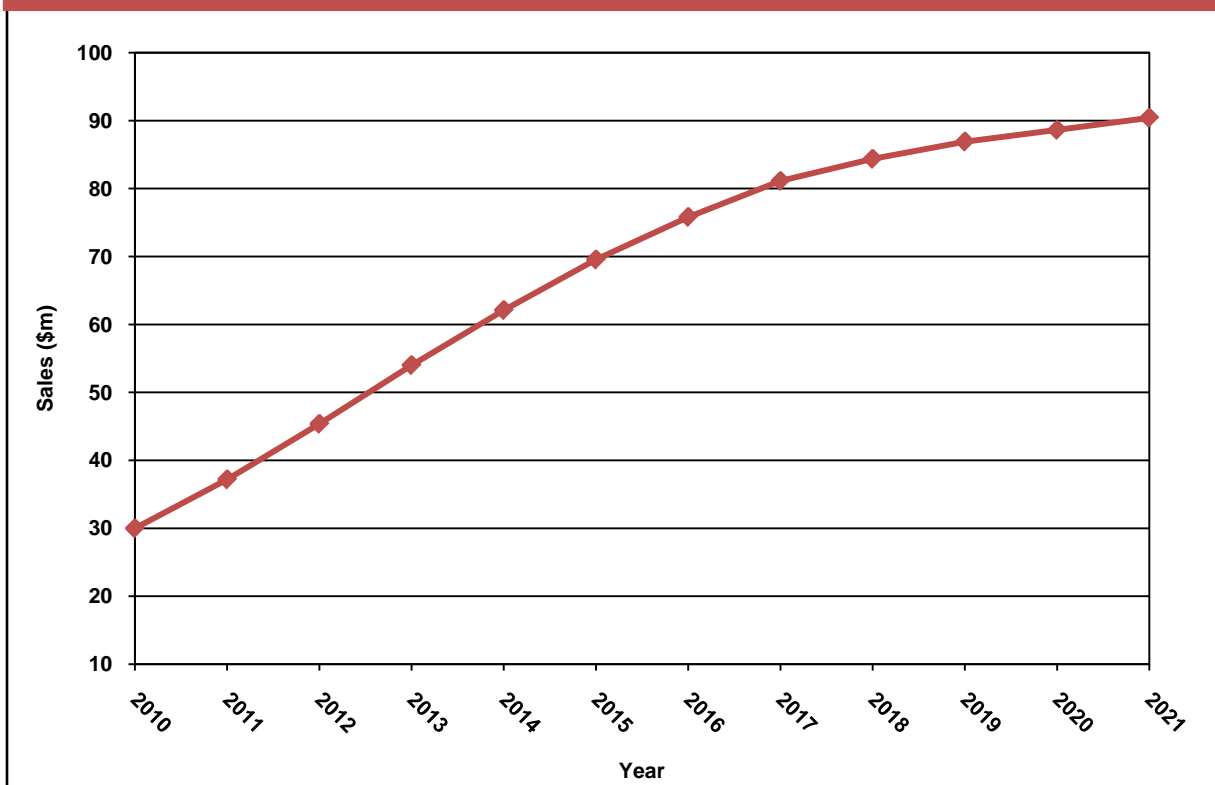
# Stem Cell Technologies: World Market Outlook 2011-2021

## 3.3.2.2 Osteocel Plus Sales Forecast 2011-2021

In 2009, NuVasive were forecasting sales of Osteocel Plus to reach \$28m, up from a reported \$10m in 2008. Visiongain believes that sales of Osteocel Plus will continue to rise steadily through the first half of the forecast period, reaching \$76m by 2016 (Table 3.6 and Figure 3.4). Growth in sales will be driven by the increased popularity of stem cell treatments overall. Osteocel Plus will have the advantage over its current stem cell competitors as it was the first to reach the market. It also has the advantage of being priced lower than its non-stem cell competitors, such as Medtronic's InFuse.

However, growth in Osteocel Plus sales will slow during the latter half of the decade, reaching \$90m by 2021. Growth in sales will be restrained by increased competition from other stem cell products, as well as non-stem cell products. Growth may also be restrained by the launch of Osteocel XC, a second generation product currently under development by Osiris. Osteocel XC was not included in the deal between Osiris and NuVasive in 2008, although the latter company does have first refusal, should Osiris decide to sell the rights to the new product, reports suggest.

Figure 3.4 Osteocel Plus Sales Forecast, 2010-2021



Source: *visiongain 2011*

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**Table 3.6 Osteocel Plus Sales Forecast, 2010-2021**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Osteocel Plus sales (\$m)	30	37	45	54	62	70	76	81	84	87	89	90
Annual growth (%)		24	22	19	15	12	9	7	4	3	2	2
CAGR (%)							16.7					3.6

Source: *visiongain 2011*

### 3.3.2.3 Other Orthopaedic Stem Cell Products

Osteocel Plus is not the only stem cell product available on the orthopaedic market. In fact, there are now three other products available competing with it. Trinity Evolution was developed by the Musculoskeletal Transplant Foundation and has been marketed since 2009 by Orthofix. Orthofix describes the product as a “cell-based bone matrix used during surgery that is designed to enhance the success of a spinal fusion procedure”. However, in 2010 Osiris and NuVasive filed a patent infringement suit against Orthofix. In December 2010, Orthofix entered into an agreement with the two companies, apparently paying it \$2m. It will also be required to make royalty payments to NuVasive based on future sales of Trinity Evolution, reports also indicate.

Two other stem cell products for orthopaedic procedures have been launched in the past two years. First was AlloSource’s AlloStem, an adipose-derived mesenchymal stem cells seeded on a 3D scaffold, which is used during surgery to promote growth and healing. As well as developing AlloStem, AlloSource – one of the largest tissue banks in the US – process Osteocel Plus for NuVasive. In February 2011, the two companies announced that AlloSource had licensed certain intellectual property for mesenchymal stem cells to NuVasive, which will enable AlloSource to distribute AlloStem.

In October 2010, AlphaTec Spine launched PureGen, a highly concentrated, pure adult stem cell product for use in facilitating bone regeneration. AlphaTec reports that this is the first product in the spinal market to use pure adult stem cells collected from healthy, live donors. Other products available on the market collect the stem cells from cadaveric tissue, reports suggest.

### 3.3.3 Stem Cells and Regenerative Medicine

Defining what is included in the stem cells market is complex because stem cells overlap, to a certain extent, with regenerative medicine. In the last decade, when stem cells were the subject of much controversy, it was often considered more market-conscious to use the term *regenerative medicine* in