Figure 1:

UVB (95%)

Skin

Pro-Vitamin D
(7-dehydrocholesterol) → Vitamin D3 (cholecalciferol)

Liver

25-hydroxyvitamin D3
calcidiol)

Kidneys:
endocrine pathway

Diet (5%):
Milk, orange juice, salmon, fish oil, supplements

Extrarenal synthesis:
paracrine & autocrine pathways

1,25-dihydroxyvitamin D3
(calcitriol)

Intestine → Bone → Muscle → Heart → Cancer → Immune system → Pancreas

Classic functions:
- Bone health

Proposed non-classic functions:
- Chronic disease prevention, e.g., heart disease, diabetes
- Cancer prevention, e.g., breast, colon
- Autoimmune disease prevention