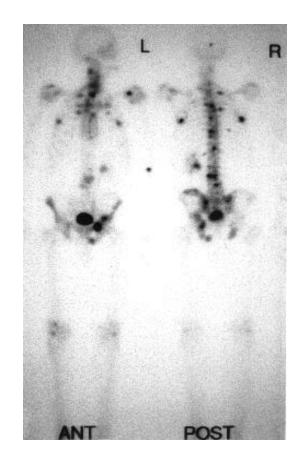


Medical Isotope Shortage: Update

October 20, 2010 Steve Mattmuller, MS, RPh, BCNP

Need: Patient Care



Fragile Mo-99 Supply

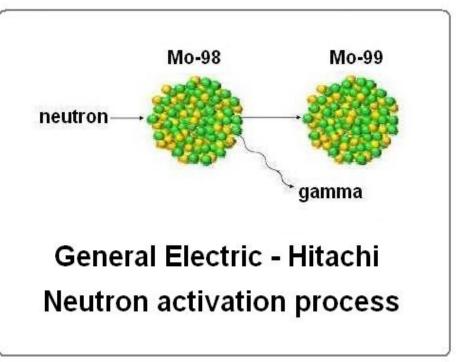


Effect on Patients

| JUNE 2009 | | | | | | | OCTOBER 2009 | | | | | | FEBRUARY 2010 | | | | | | JUNE 2010 | | | | | | | | |
|-----------|----------------|-----|----|----|----|--------------|---------------|---------|-------|---------|-----|------------------|---------------|----|-------|----|----------------|-------------|-----------|---------|----|----|----|----|----|----|----|
| S | M | T | W | T | F | S | 8 | M | T | W | т | F | 8 | 8 | М | T | W | Т | F | В | 8 | М | т | W | T | F | 8 |
| | 1 | 2 | 3 | 4 | 5 | 6 | | | | | 1 | 2 | 3 | | 1 | 2 | 3 | 4 | 5 | 6 | | | 1 | X | 3 | X | 5 |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 6 | X | 8 | 9 | 10 | 11 | 12 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 21 | 22 | 23 | X | 25 | Х | 27 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 28 | 29 | 30 | | | | | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 28 | | | | | | | 27 | 28 | 29 | 30 | | | |
| | JULY 2009 | | | | | | NOVEMBER 2009 | | | | | | MARCH 2010 | | | | | JULY 2010 | | | | | | | | | |
| 8 | | | | | | 8 | H | Ŧ | W | T | F | 8 | 8 | М | T | w | T | F | B | 8 | М | T | W | Ť | F | 8 | |
| _ | | • | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 1 | 2 | 3 | 4 | 5 | 6 | _ | | _ | | 1 | 2 | 3 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 4 | X | 6 | X | 8 | 9 | 10 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 11 | X | 13 | X | 15 | 16 | 17 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 21 | X | 23 | X | 25 | Х | 27 | 18 | X | 20 | X | 22 | X | 24 |
| 26 | 27 | 28 | 29 | 30 | 31 | | 29 | 30 | | | | | | 28 | 29 | 30 | 31 | | | | 25 | X | 27 | 28 | 29 | 30 | 31 |
| | AUGUST 2009 | | | | | | DECEMBER 2009 | | | | | APRIL 2010 | | | | | | AUGUST 2010 | | | | | | | | | |
| 8 | M | T | W | T | F | 8 | | | | | | | 12112211 | | | | | | 1100000 | | | | | | | | |
| - | | • | ** | • | | 1 | 8 | - 101 | T | W | T | F | 8 | 8 | - 101 | Т | W | | F | 8 | 8 | | T | W | T | F | 8 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | 1 | 2 | 3 | 4 | 5 | | | | | 1 | X | 3 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 4 | 5 | 6 | X | 2 | X | 10 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 22 | Х | 24 | X | 26 | 27 | 28 |
| 30 | | | | | | | 27 | 28 | 29 | 30 | 31 | | | 25 | 26 | 27 | 28 | 29 | 30 | | 29 | х | 31 | | | | |
| | | | | | | = | | | | | | | | | | | | | | | | | | | | | |
| | SEPTEMBER 2009 | | | | | JANUARY 2016 | | | | | | MAY 2010 | | | | | SEPTEMBER 2010 | | | | | | | | | | |
| 8 | M | | W | T | F | 8 | 8 | M | T | W | т., | F | 8 | 8 | M | T | w | T | F | 8 | 8 | М | T | W | T | F | 8 |
| | | 1 | 2 | 3 | 4 | 5 | 3 | | 5 | | 7 | 1 8 | 9 | | 3 | | _ | - | ~ | 1 | | | | X | 2 | X | 4 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 | 10 | 4 11 | ี่ 12 | 6 13 | 14 | 15 | 16 | 9 | X | 11 | X | 6 13 | 14 | 8 15 | 5 | X | 7 | X | 9 | X | 11 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 17 | 18 | 19 | 20 | 21 | 1 2 2 | 23 | 16 | X | 18 | × | 13 | 14 X | 22 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 23 | X | 25 | 26 | | X | 29 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 27 | 28 | 29 | 30 | | | | 31 | ZJ | 20 | 21 | 20 | 23 | J U | 30 | x | 23 | 20 | | _ | 29 | 26 | 27 | 28 | 29 | 30 | | |
| | 20 | Z.J | 70 | | | | 31 | | | | | | | 30 | | | | | | | 20 | | 20 | ZJ | 30 | | |

Long Term Solution





Goal: Optimal Patient Care

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | | | |
|--------|--------|---------|-----------|-----------|-----------|-----------|----------|----------|----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | | |
| 8 | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | | |
| 15 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | | |
| 22 | 8 | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | |
| 29 | 15 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| | 22 | 8 | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
| | 29 | 15 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | 22 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | | 29 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| | | | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| | | | 29 | 30 | 31 | | | | |